The Carolina Farmer

COVERING THE CAROLINAS FROM THE MOUNTAINS TO THE SEA

VOL. I NO. 7 SPECIAL LIVESTOCK NUMBER DECEMBER, 1946

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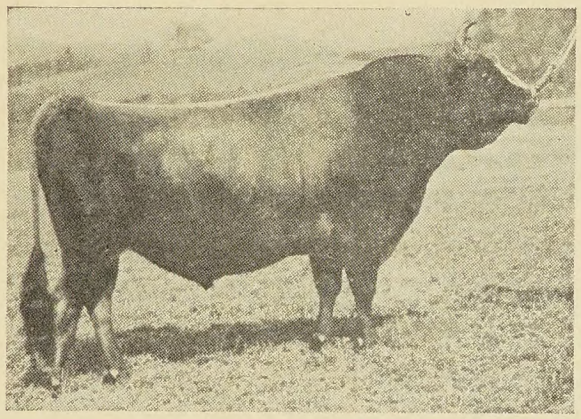

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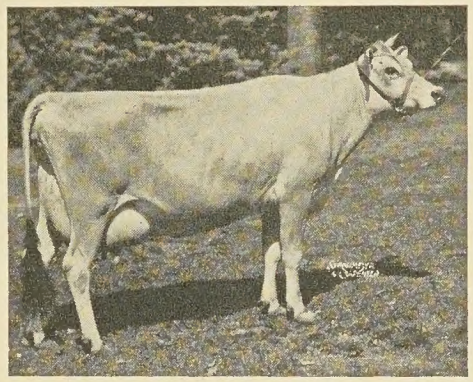
Every cow has to prove herself a profitable producer to hold her stall in one of the barns.



STANDARD DESIGN EURETTA

Age	Days	Milk	Fat
2 yrs. 5 mos.	365	8113	498
3 yrs. 9 mos.	305	12221	712
4 yrs. 10 mos.	305	11916	651
5 yrs. 11 mos.	305	10815	620

The Result of This Program Is:

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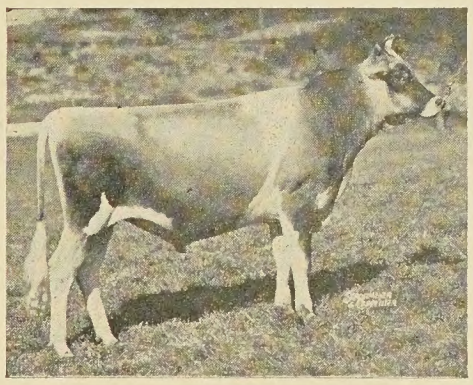


We can't spare any heifers, but we can sell you a bull that will get the right kind of heifers for you.

Heifers That Will Be Profitable Producers!

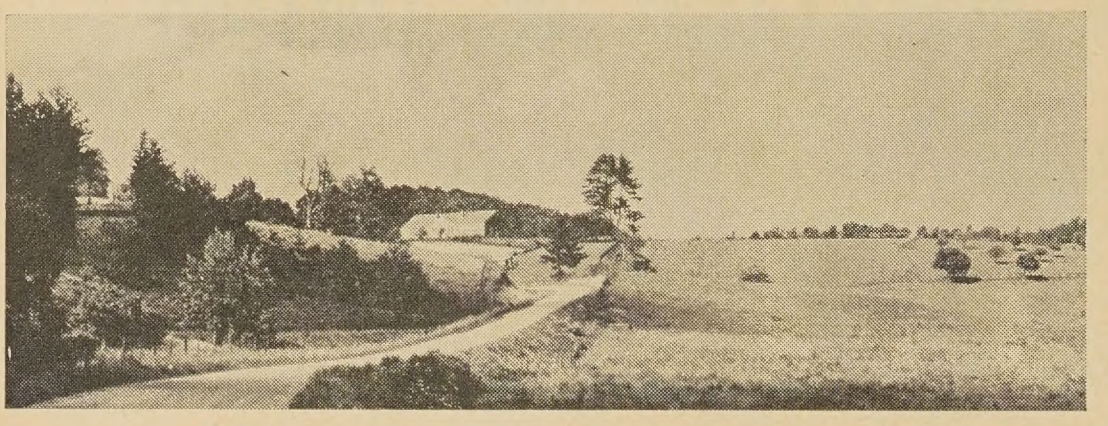
Biltmore Farms

BILTMORE (Near Asheville), NORTH CAROLINA

E. D. MITCHELL, *General Manager* ALBERT M. CLARK, *Farm Manager* TED BESH, *Herd Manager*

The Carolina Farmer

Covering the Carolinas from the Mountains to the Sea



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In This Issue

OUR FRONT COVER

United States Savings Bonds — *The Crop That Never Fails*

Courtesy Savings Bonds Division, U. S. Treasury Department

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LIVESTOCK FACTS

FROZEN FOOD LOCKERS

There are 8,025 frozen locker plants in the United States, an increase of 1,561 during the past fiscal year, reports the Department of Agriculture. Eight previous surveys have each shown an increase, but last year's is much the largest. The information was derived from reports of State Extension services and the Farm Credit Administration.

THE TURKEY INDUSTRY

The turkey industry in North Carolina can probably be termed in its infancy. The vast amount of range available for turkey growing in certain sections of North Carolina should be an inducement to the further development of this profitable enterprise. With the development of several turkey breeders and hatchers, this industry is expected to furnish the prize bird to grace North Carolina festival date tables in the state. The value of the turkey industry in 1945 was approximately $2,000,000.

WATER SYSTEMS

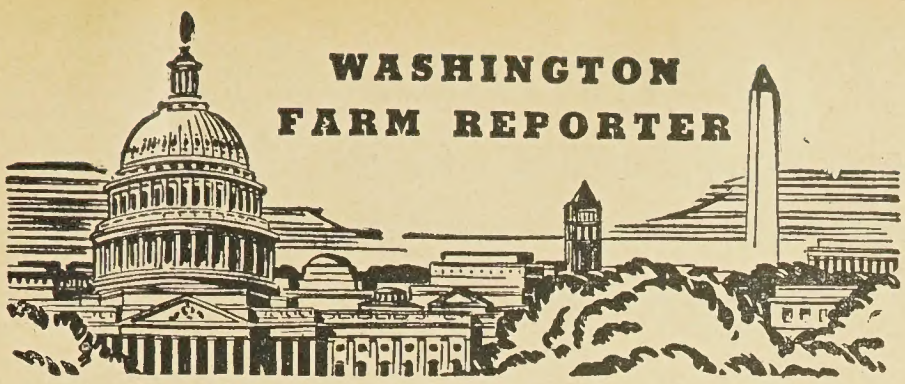
All animals must have water; but dairy cows in milk require the largest amount, in proportion to their size, of all farm livestock. This is because water makes up about 87 per cent of the milk they produce. Abundant, clean fresh water also is needed by calves, heifers, dry cows and herd bulls; and is very important in keeping equipment and barns clean. A well-planned water system is essential on the modern, efficient dairy farm.

OPA CONTROLS

OPA controls have been taken off all by-product feeds and mixed feeds, edible oils and edible oil products, soybeans, cottonseed and screenings, flaxseed but not linseed oil. The elimination includes both millfeeds and flour. It includes wet and dry corn by-products and distillers and brewers grains. All protein meal and soybean controls under WFO 9 are terminated. Controls on purchases and use of feed grains under WFO 145 are also removed. Protein meal set-asides also were terminated.

DOG FOOD

The production of prepared dog food for 13,000,000 dogs has developed into a business with retail sales of more than $100,000,000 a year. In addition, millions are spent each year on remedies and veterinary services. The various types of prepared dog food which are now so popular are the result of years of research. The stringent shortages in materials and containers have caused the industry to devise many substitutes.



Reorganization of PMA

Reorganization of the Department of Agriculture's Production and Marketing Administration, originally scheduled for October 1, but delayed because of protests from certain farm organizations, Congressmen and Departmental spokesmen, will soon become effective, announced Secretary of Agriculture Clinton P. Anderson on November 15, to the 80th annual convention of the National grange, which met at Portland, Oregon, November 13-21, inclusive.

Anderson vigorously refuted the charges: that the reorganization plan was inimical to farmers' interests; that he was engaged in wrecking the most democratic farm program in history; that the top officials of PMA are clearly business-minded officials, sympathetic chiefly with processors and the food trades.

He also answered the criticisms that the reorganization would cause great numbers of State PMA directors to be fired. "The truth was and is," the speaker said, "that no discharges were contemplated and none has happened."

"I plan to set up in the near future a Conservation Branch as a program formulating agency and move the Field Service up to staff level, one notch above the position of the program branches," stated Anderson in briefly outlining the major changes in the proposed PMA reorganization.

Grange members were assured that every phase of the reorganization plan was in strict accordance with the recommendations of the Eisenhower Committee. "The latest steps should increase farmer participation in the program," he declared; "if such a result is not achieved, I will not let the program stand; I have never relaxed in my interest in farmer participation in planning and have no intention to do other than make the Department serve the farmers of this country to the greatest degree possible."

Discussing some of the important problems facing American agriculture Anderson voiced the challenge: "Shall we use our new-found productive power as a great blessing for mankind, or shall we allow it to become a curse? In the year since the end of hostilities we have begun to meet some of the problems ahead. By throwing our full resources into the fight against famine abroad we saved many human lives and eased the problem of post-war military control in many countries."

The USDA is continuing its effort to meet the issue abroad through active participation in the work of such component organizations as the Food and Agriculture Organization, the International Emergency Food Council and the financial organization, Anderson told the Grange members.

On the domestic front he said that Congress has provided for a new scientific approach to the job of making our distribution system match the accomplishments of agriultural production. In this connection the organization and the functions of the Agricultural Research and Marketing Act of 1946 were described "This broad-scale legislation will almost certainly prove to be a cornerstone in the structure of post-war agricultural policy. It may well prove to be as important in meeting the problems of distribution and use of farm commodities as was our prewar legislation in meeting problems in the field of production and conservation."

The continuing help of the farm organizations was asked for: (1) the inevitable shifting of production in recognizing tinuation and intensification of soil conservation, (3) maintaining our protection peacetime patterns of demand, (2) conagainst undue fluctuations in prices of farm products, (4) continued protection against crop failure—through crop insurance programs and the ever-normal granary.

Going Out of Business

OPA Administrator Paul Porter last month hung up the "going out of business" sign over his office door. The battered and damaged Office of Price Administration is being liquidated to satisfy its creditors—the general public. OPA is expected to be out of business by Christmas.

The pricing agency's present difficulty seems to be locating new homes for those commodities which are scheduled to remain under control. Rents and building materials are reported to have been offered to National Housing Administrator Wilson Wyatt, who refused on the grounds that he has trouble enough in his own agency.

The remaining foods under ceilings—sugar, syrups and rice—will be transferred to the Department of Agriculture. This should be a natural transition, since Agriculture has always allocated sugar and other foods.

Food officials are uncertain when rice will be freed of ceilings . . . syrups and sugar now are expected to be released later next year in the order named.

There will be few controls to pass on to other agencies. Commodities are being released singly or, in groups, every week. OPA has issued a second omnibus decontrol action on items listed as "not important." Included are: the 200-million-dollar ice industry; radios; small electrical appliances; kitchenware; glassware; farm and garden tools; luggage; heavy forged hand tools; tool boxes; all watches and clocks; household sewing machines; household dishwashers; household refrigerators.

To stimulate production of paints, varnishes and soaps, linseed oil, cocoanut oil, fish oil, dehydrated castor oil, tallows, greases and fats have been removed from controls. The paint and soap industries say their finished products will be reaching consumers in increased volume soon.

The removal of ceilings from skins, hides, leather and shoes should increase the flow to market of all types of shoes within the next 60 days. The leather and shoe industries have been urgent in their demands for higher ceilings or decontrol.

The present scarcity of most types of shoes makes higher prices inevitable until wholesale and retail stocks are filled. Normal competition combined with discriminating purchases should bring price ranges back down to lower levels within the next six months.

Heavy textile inventories are piling up and supplies are moving into distributive channels in sufficient volume to justify the decontrol of clothing sometime before Christmas.

Meat prices have been dropping at all levels during the past month because of the unusually heavy cattle receipts at the stockyards and increasing consumer resistance. Here in Washington 260,000 consumers have pledged themselves not to pay more than 60 cents a pound for any cut of meat.

Most economists and trade association executives here believe a mild recession is due between the second and fourth quarters of 1947. Some think it will begin within six months. Most of them now agree that its extent and severity will be less than they predicted a month ago.

On the other hand, people like Civilian Production Administrator John D. Small hold "it is only necessary to retain the same high level of employment and production of today to avoid the generally predicted decline."

Problems and Objectives
of the
North Carolina Meat Processors and Dealers Association, Inc.

By A. LYLE HARRIS
Executive Secretary

THERE comes a time in the affairs of men that it is well to stop, look, listen and give thought to things as they are and as to how they should be in the future; to take stock of the workings of the past so as to carry on the things that are good, and to improve on the things that have proven to be not so good, and to adopt the things and methods that time and practice have indicated should be adopted and carried forward to better advantage.

The meat business of North Carolina is big business. To give every man, woman and child in North Carolina one half pound of meat per day would require 1,800,000 lbs. of meat daily. This means, in round numbers, 600,000,000 pounds of meat yearly. At thirty cents per pound this is, in round numbers, $200,000,000.00.

Add to this the fact that the grower, the slaughterer, the processor, the wholesaler and the retailer, with all their help, have their economic destiny tied up to the growing and supplying of meat, it's really big business in any man's language.

There goes with this business two main considerations. One, the living and economic welfare of all those engaged in the meat business. The other is the responsibility to the meat consuming public by all those engaged in the meat growing, producing, processing and distributing business. These two factors dove tail so perfectly into one another that, for success, one must and does support the other.

The meat packer, processor and distributor is an indispensable middle man. This is so by the very nature of the industry and the setup of our present economic and industrial practices. The reasons are obvious.

Tied in with the meat producing, processing and distributing business are certain immutable factors that are and must be ever taken into consideration by the industry.

Some of these are the natural results of the nature of the industry. Some are man made and both are self imposed and government imposed. Some have become a fixed routine and are permanently established—tho some of these seem to be greatly in need of improvement.

Of the government imposed regulations and restrictions some of them are of a permanent nature and some of them are of a temporary nature due to the exigencies of war time conditions. All of them are constantly in need of improvement to meet changing conditions, and to give a fair break to the industry, and, thru the industry, a fair break to the meat consuming public.

Often laws and regulations are fine in theory but they do not work out so in practice.

The meat supplying industry of North Carolina is unique in many ways. It is an industry that is carried on by many little men and is not one whereby one or two large corporations hog the business. This is a great thing for all the states economy and should be kept as is.

North Carolina meat men have a bright future ahead for another reason. The agricultural people of the state are turning more and more to the production of meat animals. This will mean more and better local livestock for slaughter.

Again there is another bright light ahead. North Carolina is fast becoming a great industrial state—meaning more consumers for meat.

Tho the meat industry of North Carolina is one that may be said in some ways to have just grown, it has now reached the point where, with its future outlook so bright, it appears to be compelled to take some concerted steps toward a more profitable

(Continued on Page 28)

A SUMMARY *of the* NORTH CAROLINA MEAT BUSINESS

Big Business. To give every man, woman and child in North Carolina one-half pound of meat daily would cost, in round numbers, $200,000,000.00.

And in Addition consider the numerous and varied people that get their living from the industry—the livestock grower, the livestock dealer, the packer and processor, the wholesaler and the retailer.

This Great Business, to function with the most profit and benefit to all concerned requires work and thought and capital in a continuous day to day and around the clock movement. Yet, in North Carolina it has no

Voice to speak for it either to the various Governmental Agencies, Federal, State, County or town; and no unified front to meet and shape its problems whether in the matter of kind and application of regulations or competition from within and from without the state. The

Regulations will ever be with the industry. The present Federal War Emergency regulations will go. Grading to standardize the product; regulations as to the movement of livestock into the state; Federal regulations as to the movement of meat products out of the state.

Health Regulations of cities and towns. These are not uniformly made or enforced.

Taxes. Taxes range all the way from the Federal Government on down thru the State, County and town governments.

OPA and RFC. The Congress makes the laws governing the industry, but the various administrationing agencies and bureaus make the rules and regulations. These are often made without all the information necessary to make them to the best interest of the members of the North Carolina Meat Industry, or to the best interest of the meat consuming public.

Industry-Wide Advertising. No concerted state wide selling campaigns have ever been initiated to overcome the sales resistance to local meat as against "Western Meat."

No one member of the meat industry of the state can effectively and economically do any of all these things, but

Acting together thru a trade association, great benefits would be brought about both for more profit to members of the industry and in the discharge of members of the industry to the public of

The great responsibilities attached to so complex an industry as meat production and distribution.

The association has set itself the task of bettering the overall conditions of all the above listed items as fast and as far as you enable it to do so by your active support and cooperation.

They Call It...

AND NO WONDER — nails, possess little feed value, and in

EDITOR'S NOTE—This article with illustrations is reprinted by permission from "The Kraftsman," published by the Kraft Food Company, Chicago, Ill.

WE often speak of the dairy cow as a machine for converting feed into milk. We select, breed, feed, and care for cows with one great purpose in mind, that of improving her ability and that of her offspring to convert the raw materials (feeds) into the finished product of the cow —milk. We make available to our cows for this purpose, good hay, silage, grains, high protein concentrates, minerals, pasture and water. Those are the recognized and accepted essentials of good feeding.

The Intake

The intake of a surprisingly large number of our cows, however, includes a few other things which do not rightfully go into the category of raw materials for milk production. I refer to the foreign objects which are swallowed by cows and which may later be found in the stomach. If we could equip each of our cows with a window in their side and stomach, and could see the entire contents of each cow's stomach as they were paraded by, we would not only be very surprised at the large number that carry foreign objects, but we would also be very surprised at the variety and nature of the objects present.

In the tripe department of a packing plant, where all the stomachs are opened and the contents removed, the collection of foreign objects are both many and varied, and by actual count 70 per cent of the cattle were carrying some of these, and cows run higher than bulls or steers.

An examination of the thousands of objects removed is not only interesting to observe, but the vast variety, cause much speculation as to how they happen to get there. The collection of these foreign objects taken from cattle in this plant and which the writer has seen, might be thrown into the following groupings:

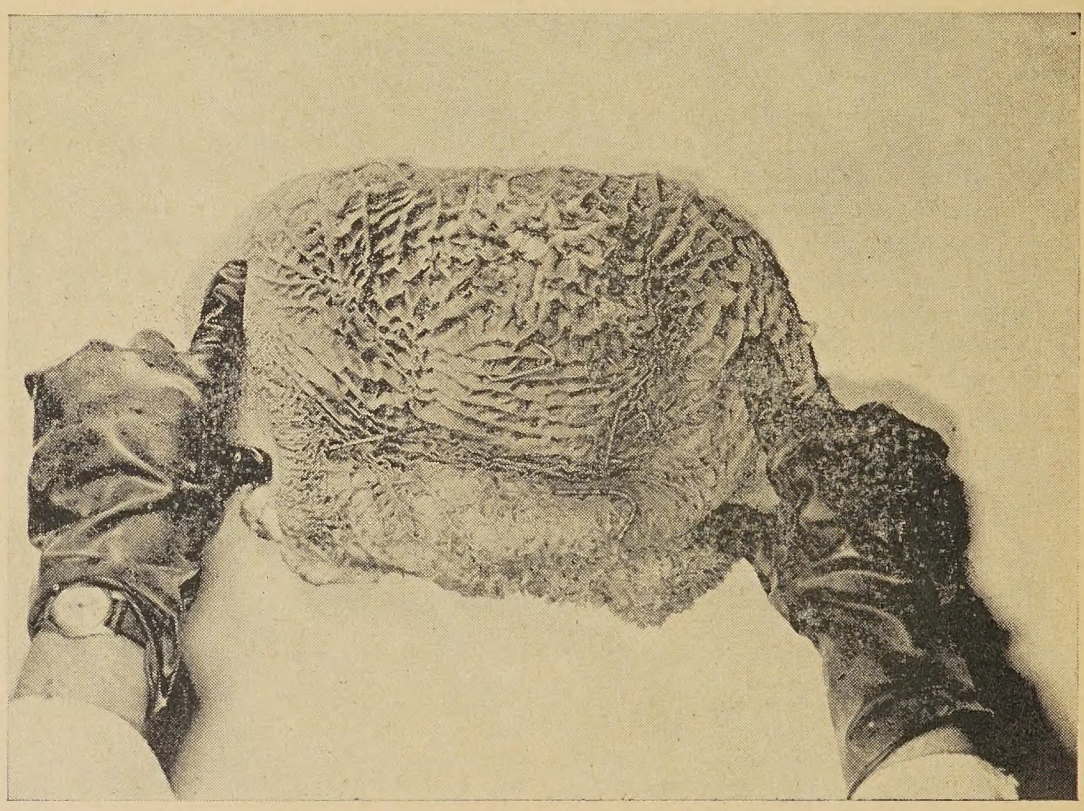
1. Coins
2. Jewelry
3. Tools
4. Stones
5. Balls
6. Wearing apparel
7. Cartridges
8. Machine parts
9. Wood objects
10. Wire
11. Nails and staples
12. Miscellaneous metal objects

Collection of 58 foreign objects taken from the stomach of one cow. Forty-two of these are nails, wire and other piercing metal objects.

"Hardware Heart"

It seems almost unbelievable in many cases that a cow could swallow some of the objects found in the stomach, but the fact that they are there is certainly evidence that they were swallowed. While many objects apparently caused little or no injury, there are many cases where this is not true. The entire carcass of more than 100 cattle were condemned due to pericarditis of often called "hardware heart" in this plant in a year. This does not include losses due to injuries which retarded milk or meat production or both.

According to the National Livestock Loss Prevention Board, in 1943 there were 4,327 beef carcasses condemned as inedible under Federal Meat Inspection for pericarditis—inflammation of the membrane surrounding the heart. In this same year 616,481 beef livers were condemned for abscess under federal inspection, constituting a loss of approximately $1,800,000. I would like to remind you again that these figures represent all the cattle killed, a large part of which are probably beef steers, while it's the dairy cows which most often carry the hardware and which carry more of it. Then too, many cattle affected with this trouble—too much hardware—never even get off the farm alive, so an estimate of the loss is difficult.



Second stomach, or "honey comb," where foreign objects collect. Note the nails, screws, hog rings, etc.

The digestive disturbances resulting from foreign objects in the stomach do not make for good gains in the feed lot or high production of milk.

Let's break down some of the above groups of objects into the more common ones and while reading these, think of what we might do to prevent our cows from picking up or swallowing such objects.

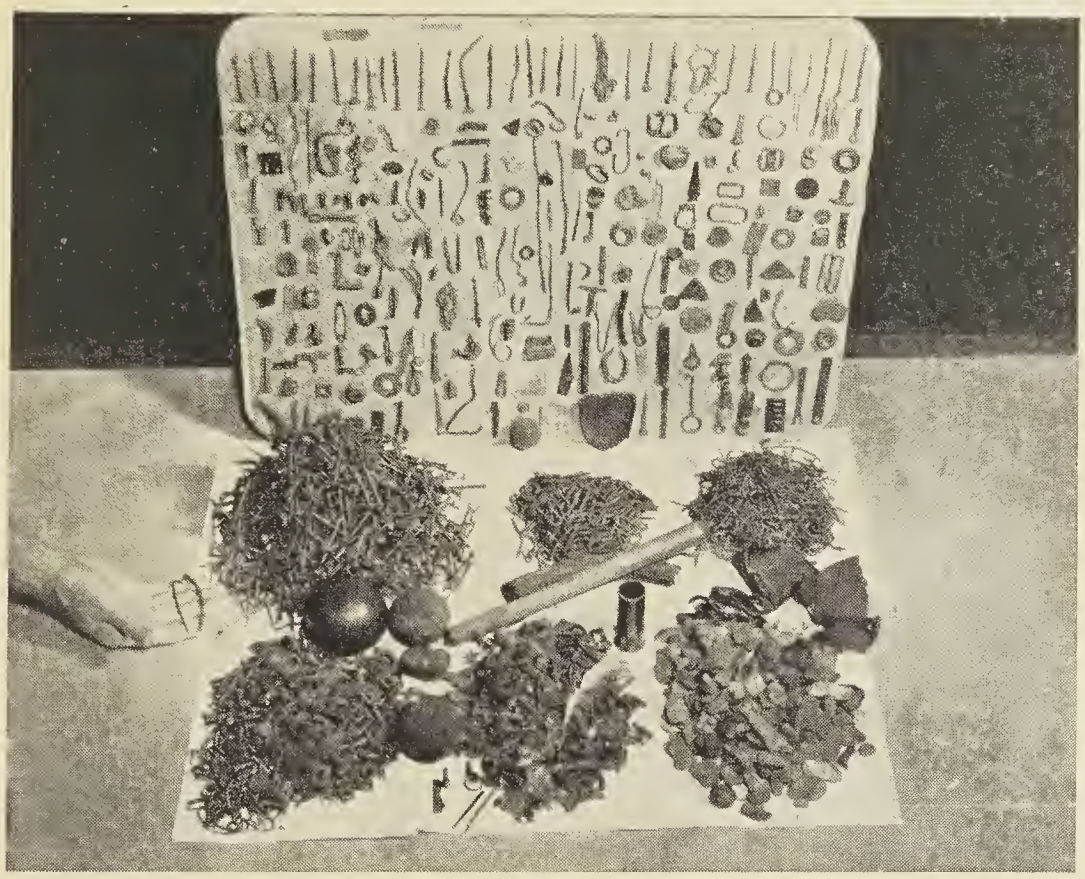
1. Coins

A surprisingly large number of cows' stomachs when opened will yield coins of various denominations.

'Hardware Disease'

baling wire, jewelry, bolts and rivets addition, are downright dangerous.

***By* J. F. WILKINSON**
Farm Service Department, Oscar Mayer Packing Company



How many of the varied group of objects taken from cow's stomachs can you identify? The writer found that close to 50 per cent of all objects removed from cow's stomachs were nails, ranging in size from tacks, brads and shingle nails to 20-penny spikes.

While these probably do very little if any harm, they eertainly will not inerease the produetion level, and you as owner, might better use them for other purposes.

2. Jewelry

Many gold objeets were found in the stomaehs of these eattle. A diamond ring, sapphires, brooehes, pins, chains, medals, erucifixes, and even gold nuggets were among the eolleetion of jewelry taken. While we often use the expression, "good as gold," when it eomes to eattle nutrition any of your feeds are better than gold as a feed.

3. Tools

It is not uncommon to find pocket knives, drill bits, awls, small punehes and such items resting peaeefully—or otherwise—in the eows' stomaehs. In most instances these are rather sharp, pointed objeets, probably dropped conveniently in the pockets of working elothes, only to get from there into the ration of our eows. A eommonly aecepted slogan for the best use of tools is to "have a place for everything, and everything in its place," but I'm sure the stomaeh of a cow is not the place for tools.

4. Stones

It's easy to understand the presence of an oeeasional small stone in the stomach of a cow. Many of these are bound to be present in the large amount of roughage eonsumed. The two pounds of stones, however, shown in the aeeompanying photo, were taken from the stomaeh of a steer slaughtered in this plant. It seems very likely that this is a ease of depraved appetite, and that a proper allowance of salt and minerals would have served its purpose mueh better than this two pounds of "ballast."

5. Balls

Balls are of two kinds as far as origin is coneerned, those from without and those from within. The larger of the balls in the aeeompanying photo are "hair balls" formed inside of the stomaeh by aeeumulations of hair swallowed by cattle. In the writer's opinion, lice infested cattle are more liable to develop these because of the habit of licking the itching areas with their rough tongue and thus increasing the intake of hair. These become coated, of course, with hard, tough outer covering from action and deposits in the stomach.

Balls from without are usually the sponge rubber type which Johnny or Mary probably lost while playing in the hay mow. Sponge rubber has never been noted particularly for its palatability, digestibility or its nutritive value for cattle.

6. Wearing Apparel

Buttons, safety pins, hair pins, rubbers, rubber heels, parts of shoes, buckles and snaps are also among the collection taken from eattle stomachs. Bone specialists and surgeons have resorted to many ingenious devices to repair and mend the broken bodies of man, but these devices have aided little in the all-important digestive processes whereby feed is converted into milk. Most of the above devices would serve both man and beast to better advantage outside of the animal body.

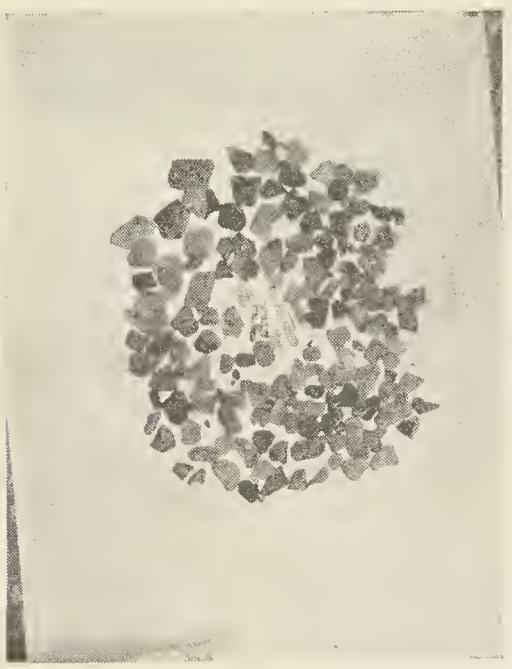
7. Cartridges

Both the lead of the bullets and the metal cartridges are very often taken from the stomachs of cattle. These, of course, enter through the mouth and the alimentary canal, and while as a rule probably do little damage, are not nearly as useful to the animals as an equal weight of feed.

8. Machine Parts

Bolts, nuts, screws, washers, rivets and broken metal objects are found in large numbers. Many of these are

(Continued on Page 29)



Another picture showing stones (2 lbs.) found in the stomach of one steer, with pocket knife to show relative size.

A Great Industry And Its Finished Product . . . MEAT

By R. C. POLLOCK
General Manager
National Livestock and Meat Board

HISTORY records the fact that our first colonists included cattle and hogs in the supplies which they landed on New England's shores —more than 300 years ago.

These first settlers were livestock-minded. They recognized the value of meat animals in utilizing the grasses of that region—and in providing them with a palatable and nutritious food. Two of our early Presidents, Washington and Jefferson, believed in livestock. They imported purebred sheep from Europe as foundation stocks for colonial flocks.

Livestock production expanded among the colonies—so much so that in due time there was a surplus of meat. Within twenty years after the first settlements, meat produced in New England was being shipped to the West Indies—marking the beginning of an export trade.

As population increased, the westward movement began. The production of livestock also moved westward. The history of the livestock and meat industry from colonial times to the present day is one of never-ending interest. Today, the production of livestock and meat is a leading industry in this country, from New England to the Pacific Coast, and from Canada to the Gulf. The growth of this industry reflects the fact that the growing and feeding of meat animals on some five and one-half million farms and ranches is recognized as being essential to a permanent agriculture.

Today, we have available a wealth of facts showing the vital necessity of livestock, from the standpoint of soil fertility, conservation, and the health of the nation. Many studies have revealed that farm prosperity is correlated with the marketing of grains and grasses in the form of cattle, hogs and sheep. Year after year, approximately 30 per cent of the farm dollar comes from the sale of meat animals.

The growth of the livestock and meat industry in this country is due to a variety of factors. The building of a network of railroads across the land made it possible to forever do away with the practice of driving cattle, hogs and sheep long distances to market. It was responsible in large measure for the development of central livestock markets where buying and selling transactions could be carried out efficiently and quickly.

The development of refrigeration and the invention of the refrigerator car made possible the rapid transportation of fresh meat from processing plants to the consuming areas.

A step forward was the establishment of Land Grant colleges with animal husbandry departments which are responsible for teaching animal husbandry and meat subjects, for carrying on research on feeds, feeding and breeding and for conducting livestock extension work.

Other important factors in the progress of the industry have been the development of 4-H boys and girls clubs and Future Farmers of America organizations, the agricultural press, and livestock exhibits and fairs.

World War II demonstrated in striking fashion the part that the livestock and meat industry plays in the nation's welfare. The men and women of the farms and ranches were called upon to produce meat and more meat. They accepted the challenge, making a production record unequalled in the industry's history. Meat production rose from less than 19 billion pounds in 1940 to about 24 billion, 700 million pounds in 1944—a gain of about 30 per cent.

In the four-year wartime period, 1941 to 1944, a total of more than 90 billion pounds of meat was produced—or at the rate of about 22 tons every minute. This meat was produced with the lowest farm and ranch population in years—with millions of farm boys and farm laborers in the service, and with a shortage of machinery, fertilizer, certain feeds and other needed materials.

In addition to chalking up this tremendous meat production record the industry's own organization—the National Live Stock and Meat Board—was called upon by the Army and Navy to take full charge of an educational meat program to assist them with their problems in the handling and utilization of meat. Members of the Board's staff went into kitchens and mess halls and conducted lecture-demonstrations in the cutting, cooking, carving, serving, and conservation of meat. Over a period of four and a half years, more than 4,300 demonstrations were conducted at 437 camps, posts and bases from coast to coast. High-ranking military leaders state that this type of work was of invaluable help in insuring that the men in service were better fed.

A very important contribution to the war effort was also made by the meat packing industry in the development of meat rations suitable for every climate where our armed forces were stationed—from the far north to the tropics.

Meat has been a favorite food of man for hundreds of years. He ate meat because he liked it, but more than that, he believed that meat was good for him. We now know that he was right. One of the factors which has contributed immensely to the forward march of the livestock and meat industry is meat research—the study of the nutrients of meat and of methods of properly preparing meat for the table.

When the National Live Stock and Meat Board was organized 23 years ago, its directors who represent all branches of the industry, decided that an intensive meat research program should be carried on. They believed that definite studies were necessary to discover all possible facts concerning the value of meat as a source of those nutrients which are necessary in an adequate diet.

This research was begun in 1924 and has been continued year after year at leading colleges and universities. During these 22 years, meat has been studied from every angle. Here are some of the facts which have been revealed: Meat is a rich source of high quality protein. This protein is not only necessary in building and repairing body tissue, but recent studies have also shown that it is highly valuable in building up the protein of the blood and in helping to prevent infectious disease.

We know now that meat is one of the richest sources of iron for building rich red blood, liver being an especially valuable source of this element. Meat is now known to be high in phosphorus which helps in building strong bones and healthy teeth. A few years ago the discovery was made that meat is one of the richest sources of the B vitamins which are so necessary for growth and health. We know that meat is necessary in

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BRAHMAN CATTLE

By VICTOR W. LEWIS
General Livestock Agent
Atlantic Coast Line Railroad

BRAHMAN cattle originated in India and are of the species Bos Indicus, whereas cattle of European origin, and common in the United States, are of the species Bos Taurus. These Indian cattle are commonly known as Brahman in the United States and Zebu in South America.

Having been developed in India in a rather warm climate and in a section where there are considerable external and internal parasites, Brahman cattle, on account of their environment, have developed unusual resistance to heat and insect pests.

Circular No. 673, issued by the U. S. Department of Agriculture, in commenting upon the Brahman breed, states:

"Though in the United States there are a few herds of purebreds of Brahman or Zebu cattle and many high grade ones, they are maintained primarily for the production of bulls for mating with the British breeds and native cattle of the Gulf coast region. The advantages of such mating are to increase the size of the cattle and to develop greater resistance to high humidity and temperatures. The hump and loose skin characteristic of the purebred Brahman breeds become less pronounced in the crossbred cattle, being in direct proportion to the percentage of Brahman blood.

"Hybrid cattle with ¼ to ½ blood of a Brahman breed and the remainder from a British breed have demonstrated unusual ability to

Herd of hybrid cattle from Brahman strain.

produce beef from grass. It is believed their greatest value will be to convert grass into beef in the humid areas of the south."

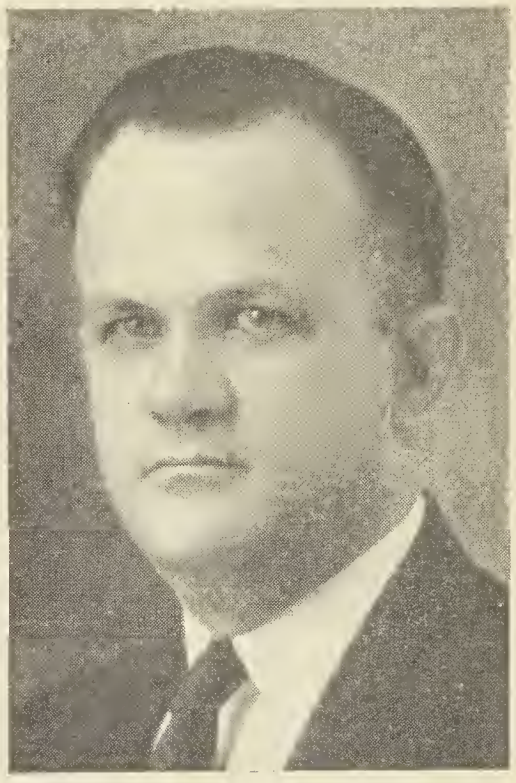
Anyone interested in Brahman cattle will do well to secure a copy of the above bulletin, which gives an account of the work done by the Bureau of Animal Industry, USDA., in crossing Brahman cattle with the British breeds and native cattle at the New Iberia Experiment Station, Jeneratte, La. There is no best breed of cattle for all sections and under all conditions.

At the beginning of the present century there was very little Brahman blood in this country. The first animal of Brahman breeding was introduced into South Carolina as a gift to our Ambassador to India. A few other individuals of the Brahman breed found their way into this country through circuses and were purchased by farmers and ranchmen. Fifty years ago the entire south was covered with the Texas fever cattle tick. Until this tick was destroyed it was next to impossible to improve the quality of the beef cattle by bringing in individuals of the British breeds. Those purchasing the early importations of Brahman cattle found them more able to thrive under tick conditions. The introduction of this blood gave greater size, hardiness, resistance to heat and insect pests, and were a valuable contribution in building up the size and quality of the native cattle. The ability of the Brahman to withstand the heat and insect pests was aided by the fact that Brahman cattle have a tendency to sweat. It was soon learned by the farmers and ranchmen that cattle of the Brahman breed would be a valuable contribution in the south under their conditions.

The original Brahman cattle brought to this country were irregular in shape and did not give the appearance of a desirable beef animal, however, their size and hardiness and ability to withstand southern conditions were factors that could not be overlooked.

Much has been done in recent years to improve the type of Brahmans. Through the process of selection a very desirable beef animal has been developed, and excellent herds of registered Brahmans are now found throughout the south, even from southern California to Virginia.

King Ranch at Kingsville, Texas is possibly the largest cattle ranch in the United States. For many years that ranch used large numbers of purebred cattle of two of the British breeds. Approximately thirty years ago that ranch decided to use Brahman blood in building a hybrid breed of cattle that would better suit their conditions. At the present time King Ranch is breeding a pure strain hybrid known as the Santa Gertrudis breed of beef cattle, which carries ⅜ Brahman and ⅝ Shorthorn blood. This is the first breed of beef cattle developed in the United States. Anyone interested in a history of this



VICTOR W. LEWIS

breed will do well to write King Ranch for the bulletin entitled "The Santa Gertrudis Breed of Beef Cattle," by Robert J. Kleberg, Jr.

While at the present time most of the blood of Brahman cattle will be found on the large ranches, there are a great many smaller herds being started in Florida, Georgia, Alabama, Virginia and the Carolinas. Florida has many of the best herds of Brahman cattle in this country. The breeders of the state held their first show and sale of purebred Brahman cattle in 1944 at Ocala, Fla. The next annual show and sale will be held January 14-17, 1947 at Ocala. The influence of Brahman breeding is being felt in that state and to the extent that at the present time fully 75 percent of the purebreed beef bulls used are Brahmans.

A few years ago a young dentist of Marion, S. C. was visiting a friend of his in Florida. He was given a Brahman bull calf, which he placed

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THE FROZEN FOOD LOCKER PLANT

A Market Outlet for North Carolina

***By* D. E. BRADY**
North Carolina Agricultural Experiment Station
Raleigh, N. C.

THE frozen food locker industry is very new in North Carolina. Its development and continued growth reflects the great need for the adequate storage and distribution of the agricultural products, meats, fruits and vegetables, for which North Carolina is well known. No other industry could so admirably fulfill this need and at the same time offer through the use of its processing and marketing facilities opportunity for increasing profitable production of meats, fruits and vegetables.

The seriousness of the lack of storage facilities in the state can best be shown by the fact that while North Carolina ranks third in the nation in farm slaughter it also ranks similarly high in meat spoilage losses. With pork curing alone many eastern counties lose up to 20 per cent of their cured meat annually. It is estimated that in 1944 more than 10 million pounds of cured pork were lost outright in the state. This alone is a loss of over $3,000,000. Nor does this include losses of fresh pork, beef, and lamb, and more important, losses in palatability and nutritive value due to inadequate meat processing and storage facilities.

In January, 1944, there were but three locker plants operating in the state: namely, at Raleigh, Lumberton and Gastonia. In addition some four or five hundred locker boxes were scattered in ice plants, retail and similar establishments. Certainly the total number of all boxes did not exceed two thousand. It was then estimated that by 1950 North Carolina should build a sufficient number of locker plants to supply the needs of at least one hundred thousand farm families or around one hundred thousand boxes. The average locker plant in North Carolina at the present time has approximately six hundred lockers. Thus it can be seen that approximately 170 locker plants are needed to serve one hundred thousand farm families. By January, 1947, it is estimated that 75 locker plants will be in operation. This is 45 per cent of the goal of "170 plants by 1950." The extremely rapid rate of growth of this industry is shown in the following table:

	Year	*Number Of Plants*
January	1944	3
January	1945	17
January	1946	30
January	1947	75*

*Estimated. (60 plants in operation and 24 under construction and nearing completion as of October 1, 1946.)

Summer Slaughtered Hogs Going in the Freezer Locker
—Recently constructed freezer locker at Dunn, N. C.

Because most of the development of the locker industry has come during the war and the present post-war period, material shortages have served as the chief difficulty to overcome. Fortunately the various governmental agencies who have been responsible for the allocation of permits have had an appreciation of the tremendous value that these plants have to our rural people in raising the standards of living, and especially the improvement of dietary standards. This is in addition to their immense value in preventing the loss of millions of pounds of farm products, fruits and vegetables as well as meats.

It may be of some interest to know that the value of the 75 plants which will be in operation January 1, 1947, will exceed four million dollars and will have a half-million dollar annual payroll. These plants will cure ten million pounds of pork and put through about twenty-five million pounds of frozen products. By 1950 it is estimated that at least 20 per cent of all the meat raised in North Carolina will be going through the frozen food locker plants. That is about fifty millions pounds of meat plus five to ten million pounds of fruits and vegetables. This, of course, does not include the vegetables which will be processed for commercial sales outlets. Approximately 550 pounds of frozen produce goes through the average locker in a year. With the tremendous increase in the sales of home units many people will be putting through a much larger amount. It is assumed that by 1950 North Carolina will have one hundred thousand lockers and as many home units. It can readily be seen what a tremendous tonnage of food will be handled, and certainly the savings which will result to the farm patrons will approximate ten million dollars.

The processing and marketing facilities of frozen food locker plants in North Carolina will provide the means for eliminating the excessive marketing costs which have heretofore hindered the full development of the agricultural resources of the state. Too much of North Carolina's produce is shipped out of the state for processing and then shipped back into the state for sale. This is a costly procedure for North Carolina.

North Carolina produces approximately one-quarter billion pounds of meat annually excluding poultry and seafoods. This averages seventy pounds of meat per person. The average consumption of meat in the United States is around 130 to 140 pounds. During the period from 1926 to 1942 the annual pork production from this state exceed 250,000,000 pounds live weight. Of this amount approximately three-quarters was slaughtered on farms and an additional 10 per cent was slaughtered locally. Thus although the principal market for the livestock produced in the state is the local market, North Carolina has inadequate livestock production to serve local needs. With the facilities of the locker plants available for processing and marketing North Carolina can well afford to increase its livestock production, not only to meet the needs of the local market but also for out of state markets.

North Carolina produces a great variety of fruits and vegetables for the larger northern markets and only a small amount of these products are commercially processed here. Again, the locker plants in the state can and will serve as processing centers and market outlets for these products. It should be noted, however, that processing centers cannot exist where they must use as their basis of supply surplus products from the fresh market. It is a well known fact that a considerable quantity of many crops, such as strawberries and snap beans which are raised in North Carolina, are either canned or frozen at important processing centers outside the state. These processing centers do have, however, a guaranteed supply of produce available which is sufficient to care for the operation of these plants. A good example of this is the Seabrook Farms which has 40,000 acres in crop area alone to serve as a guaranteed supply for the plant. Strawberries are now grown in this state primarily for the fresh market. Authorities say, however, that growers could well extend the harvest period for strawberries by planting two or three varieties and producing a definite portion of this crop for freezing purposes. The growing of high quality sweet corn in this state is always a consideration. The production of frozen corn in the United States was tripled from the 1937-40 period to the 1941-44 period. While yellow sweet corn has not been grown to any extent in North Carolina, it nevertheless can be satisfactorily grown here, according to Dr. Harvey, North Carolina corn breeder and production expert. It has been found that in other areas where sweet corn is grown for canning, it is frequently produced largely by dairymen. These growers make a single pulling of the ears and then cut the corn for silage. Certainly such a program for freezing corn might fit admirably into a plan for the expanding dairy industry in North Carolina.

Expansion of the rapidly growing snap bean acreage in the western part of the state opens up the possibility for freezing snap beans in North Carolina. At present approximately 25 to 30 per cent of these beans are processed. Likewise, cauliflower and broccoli, which are not grown to any extent in North Carolina at present, can be grown here both in the mountains and the eastern part of the state. Both frozen cauliflower and broccoli are excellent products. The wild blackberry offers real opportunity as a cash crop and should not be neglected. A New York juice manufacturer recently indicated that he would take all of the frozen blackberries of good quality which he could obtain from this state. Eastern grown freestone peaches are being frozen each year in ever increasing quantities. These products possess high quality and there is a real outlet for them. The freezing of sliced apples for the pie trade has increased enormously for the past three years. Certainly those who have followed the apple industry have not overlooked other possibilities for frozen apples.

The sweet potato at present enjoys large scale production in North Carolina. The utilization of this product has not received the consideration due it. The success of any freezing operation is dependent upon a long season of operation. It can readily be seen how this product could fit into this whole program. The per capita consumption of sweet potatoes is low in all areas of this country except in the southeastern states.

Poultry is one of the biggest industries in the state. Without the poultry industry it is unlikely that thousands of families, many of them living on impoverished soil, could make a living by any other means from their land. War time conditions not only stimulated poultry production, but it also stimulated poultry processing plants in this state. At present there are five large dressing plants and 70 small plants in North Carolina. It is generally considered that plants processing 30,000 or more birds per week are of large size.

According to authorities in the poultry field, North Carolina has at present a sufficiency of these plants. It is unlikely that at least in the relatively near future investment in poultry dressing plants could be justified. There is, however, an urgent need for storage capacity for dressed poultry. The extent of this need will of course depend upon economic conditions, but we can certainly contemplate need of

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Grange Gleanings . . .

Report From National Convention

"More than 10,000 members attended the 80th annual session of the National Grange in Portland, Oregon," according to a statement by Mrs. Harry B. Caldwell, Master of the State Grange upon her return.

"The organization endorsed the use of marketing quotas when approved by two-thirds of the growers voting in a referendum, for preventing unmanageable surpluses; the Expansion of the Marketing Agreement Act; the use of support prices to assure Consumers adequate supplies and producers a fair price and the expansion of international trade through Commodity Agreement programs supplemented by such devises as the Export Debenture Plan or Equalization Fee to assure American Farmers a fair share of world markets," she said. "These objectives are of particular interest to North Carolina cotton, tobacco, peanut, dairy, livestock and poultry farmers."

A. S. Goss, Master of the National Grange, was authorized to invite representatives from the Irish potato growing regions to meet in Washington to work out a potato program that will assure Consumers of abundance and producers fair prices without producing excess surpluses as occured in 1946.

The 10-point Grange Farm policy adopted is as follows;

(1) Conservation of our basic natural wealth of soil and timber must be promoted through sound soil-building, water-conservation and fire-prevention programs on a self-sustaining basis.

(2) Farmers' equitable share of the national income must be secured through a modernized parity and obtained through fair market prices rather than subsidies. Support prices are justified where necessary to assure consumers adequate supplies and producers a fair price.

(3) We shall continue as in the past to encourage both marketing and purchasing cooperative farmer organizations as the first reliance for adjusting and stabilizing markets in the interest of both producers and consumers.

(4) The Grange supports efforts of the Council of Economic Advisers created by Congress for development of a "stock of remedies" for emergency actions in meeting economic dislocations and restoring an economy of balanced abundance.

(5) We urge extension of the Marketing Agreement Act to include producers of commodities which can use it to an advantage in securing for consumers adequate supplies at reasonable prices while at the same time protecting producers against seasonal market dislocations.

(6) We favor use of marketing quotas, when approved by two-thirds of the growers voting in a referendum, for preventing surpluses from creating market gluts; supported by a multiple-price system domestically for utilization of surpluses.

(7) We favor expansion of international trade through commodity agreement programs and the use of such devices as the Export Debenture Plan and Equalization Fee for assuring American farmers a fair share of world markets, and the adoption of safeguards which would protect domestic producers from imports in such volume as to destroy the American market for American producers.

(8) We favor establishment of a health program which would include preventive medicines; make adequate hospital and medical facilities available to all areas through cooperative efforts; and the establishment of a federal Office of Nutrition to cooperate with state, local and private agencies in promoting improved diets.

(9) We favor federal and state guidance and assistance in the development of sound, long-range readjustment programs for areas where changes in agricultural production have created serious, social or economic problems.

(10) We urge consolidation and coordination of federal agencies participating in the Agricultural Research and Marketing Act in order to centralize authority, eliminate duplication, and obtain maximum efficiency. We recommend that each cooperating state appoint advisory committees patterned after the National Advisory Committee, to work with state agencies in developing sound research programs.

Ten Planks in State Grange Platform

The North Carolina State Grange at its recent meeting in Clinton featured support of the following ten Resolutions:

1. Favored modernizing "parity formula" to include cost of labor and more nearly accurately reflect present farm production costs.

2. Endorsed program of State Medical Care Commission for "More Hospitals, More Doctors, More Insurance."

3. Reiterated support of cooperative buying and selling by farmers.

4. Urged more agricultural research.

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Farm Bureau . . .

Farm Bureau Developing Potato Program

By Porter Taylor

President O'Neal presided at a meeting of representatives of potato growers at Washington on September 18 and 19, called to make recommendations as to possible Farm Bureau action in connection with the potato programs announced by the U.S.D.A., earlier in September. The committee made the following recommendations, which have been transmitted to Secretary Anderson.

Support purchases should be immediately resumed in areas where needed, but if this cannot be done the loan rate should be immediately increased to 90% of the support price, or the same basis as was in effect last season. If adopted, this recommendation would immediately increase the level of support during the harvest season from the present rate of 75% of parity, which is substantially below the requirement of the Steagall Amendment to the basis which was in effect last season.

Since the time of the meeting prices had declined below the support level in certain states. A telegraphic survey made on September 25th showed 12 of the 16 late crop states checked reported prices below the support level. As a result of this situation growers who cannot store or who must market their crop will not be able to receive the benefit of the support program.

The committee also recommended that a provision be included in the 1947 program that no growers should be eligible for support if he exceeds an allotment established in advance. Such an individual allotment would be determined from a county and state quota, based upon the 1941-45 acreage of potatoes planted, in conformity with the requests of the War Food Administration for increased production.

Other questions of long time interest to potato growers were discussed on December 7 at San Francisco at a conference of State Farm Bureau representatives, called to discuss establishment of a Potato Sub-Committee to make recommendations to the Fruit and Vegetable Committee and the Board of Directors.

Another subject of major interest at the San Francisco meeting was some of the steps which can be taken to improve the quality of potatoes offered to the consumer, with the hope that such action may stop the decline in per capita consumption and result in an increase.

Livestock

By Herman C. Aaberg

Lifting price controls on livestock and meat by the president October 15 marked the end of many battles waged by all segments of the livestock industry of reestablish a free economy for American's No. 1 farm product meat. These battles have not been without casualties and many wounds will be slow to heal. Normal methods of production have been thrown out of gear, quality production has been generally penalized through rigid price controls.

The public must realize that it will take several months for the livestock industry to reconvert to a free economy. Lifting controls will speed this process. The near record numbers of beef cattle on farms and ranches must be grain fed for maximum production of beef. This takes from three to six months. Hogs can be fed to heavier weights but all this delays marketing. Full production of hogs cannot be obtained for at least a year. Sheep and lamb production will take even longer.

Fortunately livestock producers have a near record supply of feed to convert into the chops and steaks for which meat hungry consumers are now clamoring. Consumers must have patience and can practice a little price control by not insisting on the choice cuts of meat which will continue in short supply for several months.—The Nation's Agriculture.

National Dairy Conference

By Wilfred Shaw

The program was as follows for the Dairy Conference on Monday, December 9, the first day of the A.F.B.F. annual meeting at San Francisco.

Mr. Frank White of Minnesota, Chairman of the A.F.B.F. Dairy Committee and President of the Minnesota Farm Bureau Federation, presided over the Dairy Conference. A review of the past years Dairy Committee activities was presented by the Dairy Department Director.

The subject of promotion, merchan-

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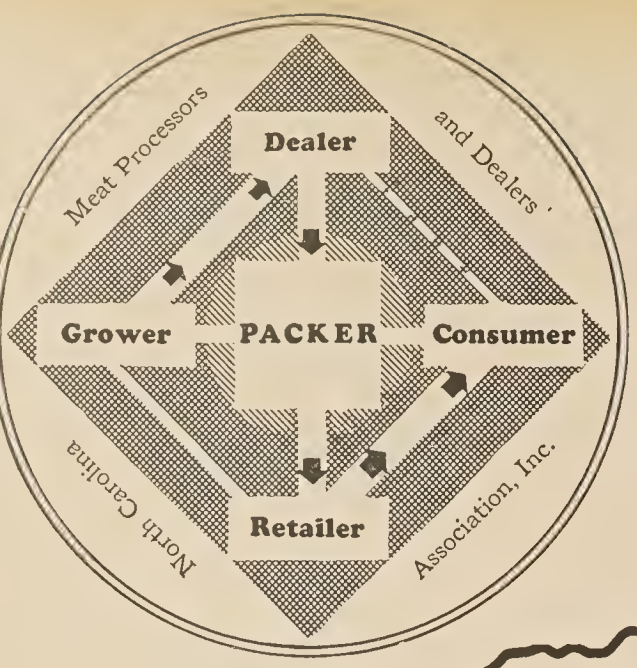
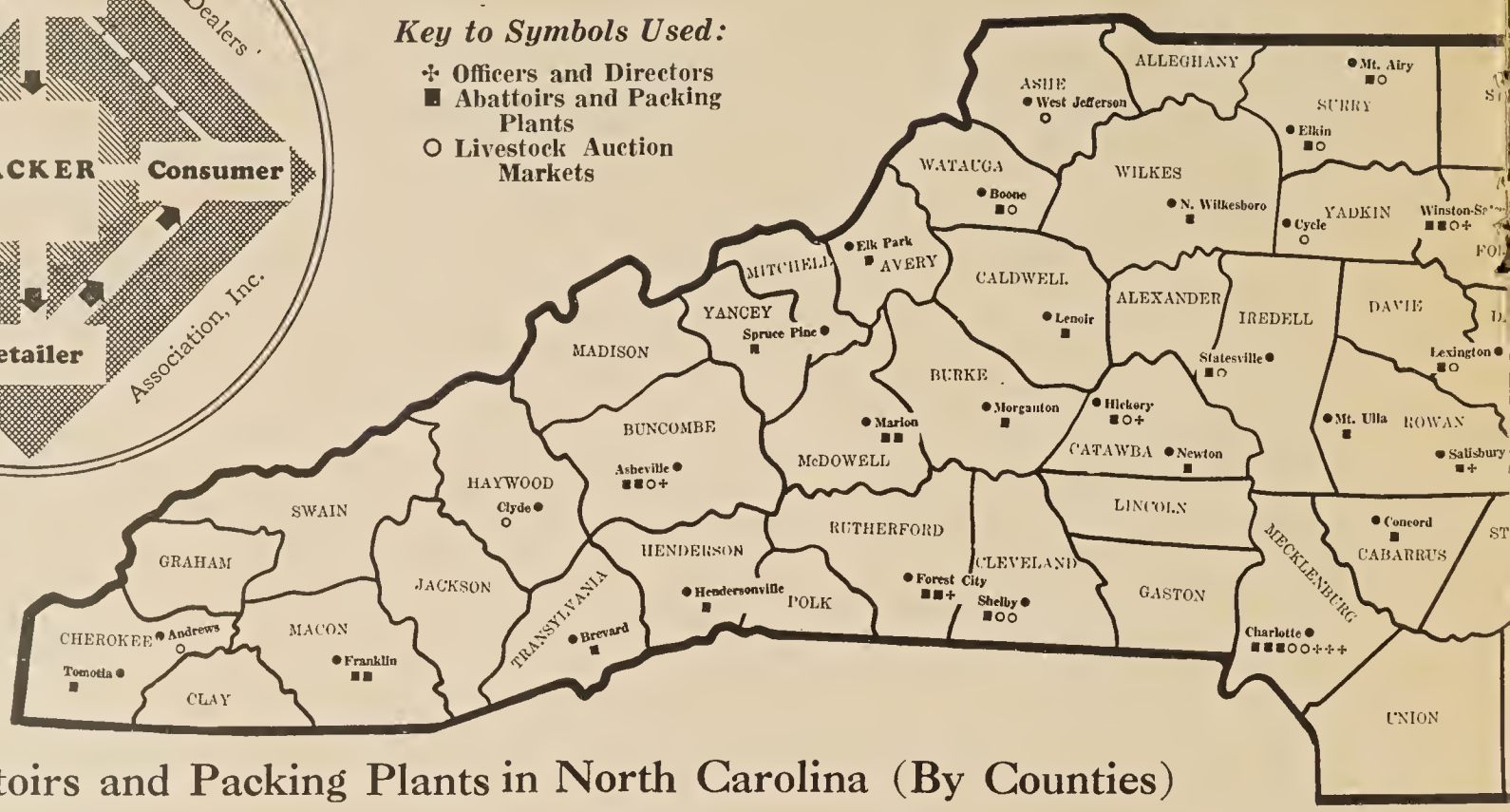


Nerve Centers of North Carolin

Key to Symbols Used:

- ✣ Officers and Directors
- ■ Abattoirs and Packing Plants
- ○ Livestock Auction Markets



Abattoirs and Packing Plants in North Carolina (By Counties)

COUNTY	NAME	LOCATION
Alamance	Patterson's Abattoir	Burlington, N. C.
Anson	Parker's Abattoir	Wadesboro, N. C.
Avery	Baum's Abattoir	Elk Park, N. C.
Beaufort	Hunneycutt's Abattoir	Washington, N. C.
	Johnston's Abattoir	Pantegos, N. C.
	Topping's Abattoir	Pantegos, N. C.
Bertie	Bird's Abattoir	Windsor, N. C.
Bladen	Butler's Abattoir	Elizabethtown, N. C.
Buncombe	Asheville Packing Co.	Asheville, N. C.
	Baker Packing Co.	Asheville, N. C.
Burke	Abernathy Abattoir	Morganton, N. C.
Cabarrus	Cook's Abattoir	Concord, N. C.
Caldwell	John Clay Wholesale Meats	Lenoir, N. C.
Camden	Dave Cartwright	South Mills, N. C.
	Morris Abattoir	South Mills, N. C.
Carteret	Conner's Abattoir	North Harlowe, N. C.
	Hardesty's Abattoir	Beaufort, N. C.
Catawba	Hickory Packing Co.	Hickory, N. C.
	E. E. Sigmon	Newton, N. C.
Chatham	Farell's Abattoir	Pittsboro, N. C.
Cherokee	Gilbert Stiles Abattoir	Tomotla, N. C.
Chowan	Bynum's Abattoir	Edenton, N C.
	Davenport's Abattoir	Edenton, N. C.
Cleveland	Beam's Abattoir	Shelby, N. C.
Columbus	N. C. Lumber Company Abattoir	Hallsboro, N. C.
	Chadbourn Packing Co. Abattoir	Chadbourn, N. C.
Craven	Hardison's Abattoir	Jasper, N. C.
	Kersey's Abattoir	New Bern, N. C.
	Pat Weiss	Vanceboro, N. C.
Cumberland	City Abattoir	Fayetteville, N. C.
Currituck	Mattie Wright	Jarvisburg, N. C.
Davidson	Brantley Leonard	Lexington, N. C.
Durham	J. J. Appel	Durham, N. C.
	W. W. Page	Durham, N. C.
	Odell Ross	Durham, N. C.
Edgecombe	Parkers Abattoir	Tarboro, N. C.
Edgecombe-Nash	Bullock's Abattoir	Rocky Mount, N. C.
Forsyth	Municipal Abattoir	Winston-Salem, N. C.
	H. F. Brinkley	Winston-Salem, N. C.
Granville	Harris Abattoir (Old)	Oxford, N. C.
	Harris Abattoir (New)	Oxford, N. C.
Guilford	City Abattoir	Greensboro, N. C.
	Municipal Abattoir	High Point, N. C.
	J. T. Neese	Greensboro, N. C.
Halifax	Vicks Abattoir	Enfield, N. C.
Halifax-Warren	Crawley's Abattoir	Littleton, N. C.
	Skinner's Abattoir	Littleton, N. C.
Harnett	Hammond's Abattoir	Erwin, N. C.
	Hodges' Abattoir	Dunn, N. C.
	Hobbs' Abattoir	Bunnlevel, N. C.
Henderson	Municipal Abattoir	Hendersonville, N. C.
Hoke	Hoke County Abattoir	Raeford, N. C.
Hyde	Boomer's Abattoir	Swanquarter, N. C.
	McKenney's Abattoir	Englebard, N. C.
Iredell	Statesville Packing Co.	Statesville, N. C.
Johnston	Carolina Packing Co.	Smithfield, N. C.
Lee	Patterson's Abattoir	Sanford, N. C.
Lenoir	Tyndall-Caroon Abattoir	Kinston, N. C.
Macon	Bradley's Abattoir	Franklin, N. C.
	McCoy's Abattoir	Franklin, N. C.
Martin	Robertson's Abattoir	Williamston, N. C.
McDowell	J. C. Rabb Abattoir	Marion, N. C.
	Marion's Abattoir	Marion, N. C.
Mecklenburg	Charlotte Abattoir	Charlotte, N. C.
	Godley's Abattoir	Charlotte, N. C.
	Cook's Sausage Company	Charlotte, N. C.
Mitchell	Spruce Pine Stores	Spruce Pine, N. C.
Moore	Cheek's Abattoir	West End, N. C.
	Pinehurst Abattoir, Inc.	Pinehurst, N. C.
	Aberdeen Meat Packing Co.	Aberdeen, N. C.
	Baker's Abattoir	Carthage, N. C.
New Hanover	Moore's Abattoir	Castle Hayne, N. C.
Onslow	Richlands' Abattoir	Richlands, N. C.
Orange	Farmers' Mutual	Hillsboro, N. C.
	Piedmont Packing Co.	Hillsboro, N. C.
Pasquotank	Elmer Brothers	Elizabeth City, N. C.
	Love Brothers	Elizabetb City, N. C.
	M. C. Love	Elizabeth City, N. C.
	O. E. Overman	Elizabeth City, N. C.
	Pappendick Market	Elizabetb City, N. C.
	Chas. (Pap) Pritchard	Elizabeth City, N. C.
	Pritchard & Davis	Elizabeth City, N. C.
	Seldan Brothers	Elizabeth City, N. C.
	Guy Webb	Elizabeth City, N. C.
Pender	Henry Clarke (to be constructed)	Rocky Point, N. C.
	A. L. Rooks	Rocky Point, N. C.
	M. A. Rooks	Rocky Point, N. C.
Perquimans	Barbee's Abattoir	Hertford, N. C.
	Josiah Elliott	Hertford, N. C.
	Jessup's Abattoir	Winfall, N. C.
Pitt	Greenville Packing Co.	Greenville, N. C.
	Pollard's Abattoir	Greenville, N. C.
	Thomas Abattoir	Bethel, N, C.
	Whitehurst Abattoir	Bethel, N. C.
Richmond	Miller's Abattoir	Ellerbe, N. C.
	Boyd's Abattoir	Hamlet, N. C.
Robeson	Pate's Abattoir	Pembroke, N. C.
	Goodyear's Abattoir & Sausage Plant	Lumberton, N. C.
	Bullard & McLean's Abattoir	Lumberton, N. C.
	Alford's Abattoir	St. Pauls, N. C.
Rockingham	J. B. Edwards	Leaksville, N. C.
	A. B. Land	Spray, N. C.
	Moricle's	Reidsville, N. C.
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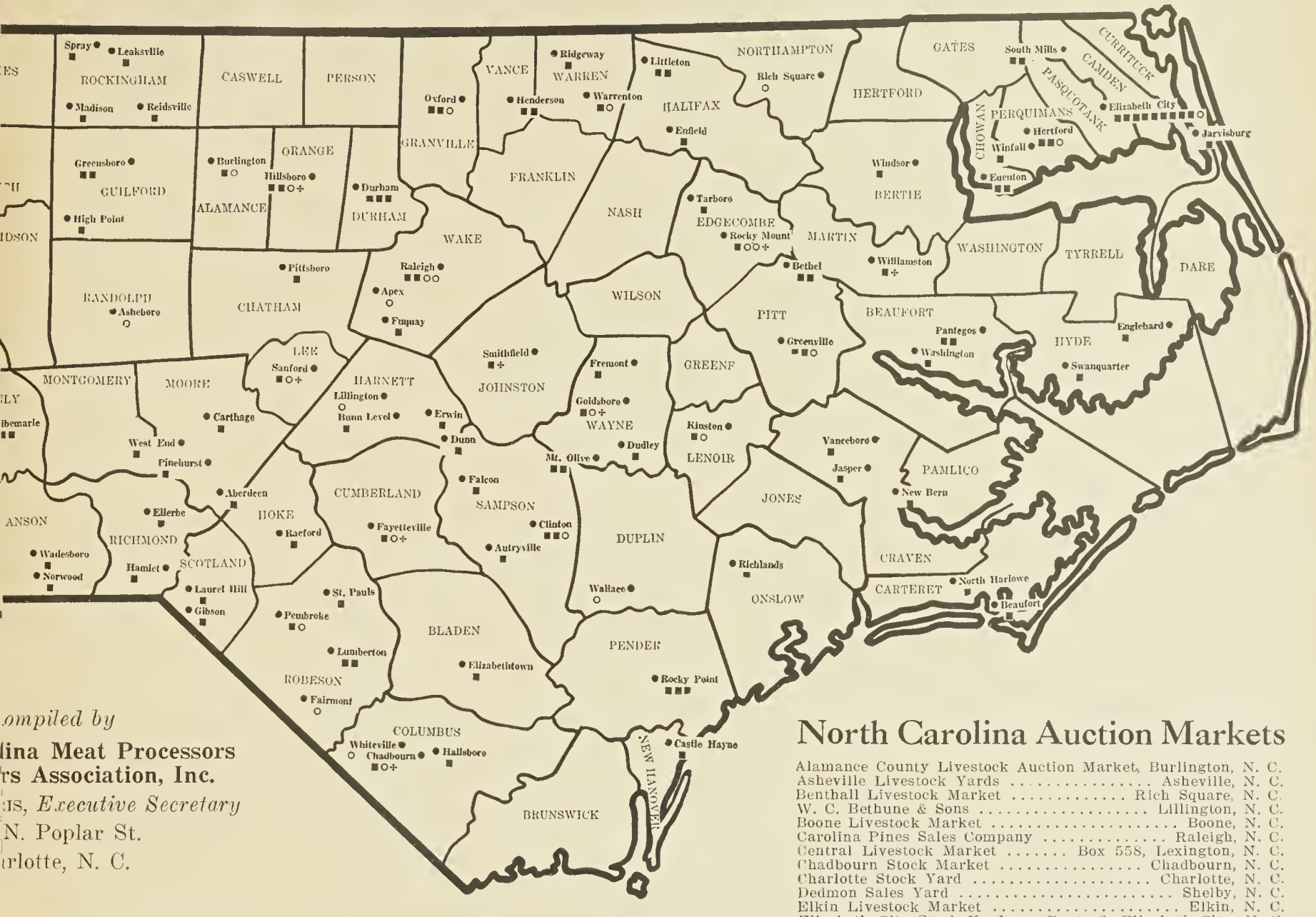

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A High Grade North Carolina Product for Discriminating North Carolina Folks

Carolinas Sweet Potato Council *Reports*

How We Could Produce Better Crops

EDITOR'S NOTE—Mr. J. E. Durant, of Lynchburg, S. C., grower of Porto Rican sweet potatoes, was recently asked to explain the practices that enable him to grow a "bumper" crop every year. Here is his answer.

The soil for sweet potatoes should be broken from 8 to 10 inches deep and then harrowed. I use a large middle buster to lay off rows 3½ feet apart. Then apply 1000 lbs. of a high grade fertilizer, and mix thoroughly in soil. The bed should be a four furrow bed to get the necessary height so as to give potatoes a soft seed bed to grow in.

The fertilizer should be not less than a 3-9-9 with 50% of potash from sulphate and 35% nitrogen from organic source. I use 200 pounds nitrogen as side dressing at first cultivation, applying 100 pounds on each side.

The plants should be spaced 10 to 12 inches in hills, with 1 to 1½ inches of roots cut off as this will avoid the most of the round potatoes. The cultivation should be as shallow as possible to prevent cutting the feed roots.

The selection of hills at harvest time is a very important factor in increasing production and improving the quality of potato. The hills should not have less than four No. 1's and should be shaped right and have proper outside color. Nothing less than a No. 1 should be bedded and a jumbo with the right inside color will produce a much stronger plant. This, of course, will increase production as the strong plants will give a better stand and will begin to set potatoes two weeks to thirty days ahead of the week plants from smaller potatoes. My yield over a period of 6 years has been increased from 20 to 40% by using No. 1's or larger for bedding.

From 1½ to 2 inches of potato should be cut off on blossom end at bedding time to secure proper inside color. We lose very few sprouts by cutting, as those are the last plants to come up.

I found a hill this season where two plants were put in one hill and this hill developed under normal conditions, as there was a hill eleven inches on either side. The hill where two pants were, had 12 No. 1's, 2½ to 3 inches in diameter, four No. 2's, and four smaller potatoes — all smooth and well formed.

I would like to see some of our producers try a quarter or half acre with two plants to hill space 10 to 12 inches apart. I think we should increase our fertilizer from 58 to 75% where we use two plants per hill.

I feel sure, if our dealers would put on an educational campaign and get the producers to grow a better product, that within a few years our product in the two Carolinas would be as good as could be found.

I think the dealers should give a good producer a premium, as this would tend to cause all growers to improve their product.

How To Fight Disease

A paper written by Mr. O. H. Elmer, Department of Botany, has been released by the Kansas Agricultural Experiment Station dealing with Sweet Potato Seed and Sprout Treatments, reminding sweet potato growers of certain practices that will help in preventing losses due to diseases. Diseases annually cause the loss of many dollars worth of sweet potatoes and much of this loss can be prevented with little time or added expense, it is said. The following information is from this paper:

1. At planting time do not fail to (a) select the seed that is to be planted and discard all disease-infected roots; (b) treat the seed in wettable Spergon. Mix wettable Spergon with water at the rate of 2 ounces per gallon. Simply dip the seed in and out, being sure all sweet potatoes are wetted. Then bed the treated sweet potatoes. Wettable Spergon kills spores of backrot and other disease producing organisms that are borne on their surfaces. It does not injure the seed. In the past four years, tests have been made in eleven different hotbeds. These half-bushel lots of seed were treated: one each in wettable Spergon, Semesan Bel, and corrosive sublimate; a fourth lot was left untreated. Total number of sprouts produced in these beds were as follows:

Wettable Spergon	9996	sprouts
Semesan Bel	8190	"
Corrosive sublimate	7495	"
Untreated	8630	"

(c) Use disease-free soil or sand in the hotbed. Do not use the soil or sand used for previous years' bed nor soil from sweet potato fields. It would be pointless to select good seed and treat it if the plants are allowed to become infected from disease-infected hotbed soil or sand.

2. At planting time dip the underground

(Continued on Page 25)

DAIRY RECORDS ARE ESSENTIAL TO SUCCESSFUL HERD MANAGEMENT

By J. A. AREY
Extension Dairyman

A FEW years ago a herd of forty Holstein cows located in the eastern part of North Carolina was placed on Dairy Herd Improvement test. When the application was received I visited the herd and found that the daily herd average milk production was not only low but that no breeding records were available. A new herdsman had just been secured. I was informed that the old herdsman kept his breeding records on a calendar which was supposed to stay in the feed room. This calendar could not be located. Since there were no available breeding records it was necessary to have a veterinarian examine a number of the cows for pregnancy. Several open cows, which were supposed to be in calf, were located. These animals proved later to be sterile and were slaughtered for beef. Heifers not in calf, but which were supposed to be were also located. Since no breeding records were available it was impossible to determine whether the bulls or the females were responsible for this trouble. Without records of any kind to guide him the first year the new herdsman had to feel his way. An average butterfat production of 219 pounds were secured. During this period, however, the shy breeders were located and slaughtered.

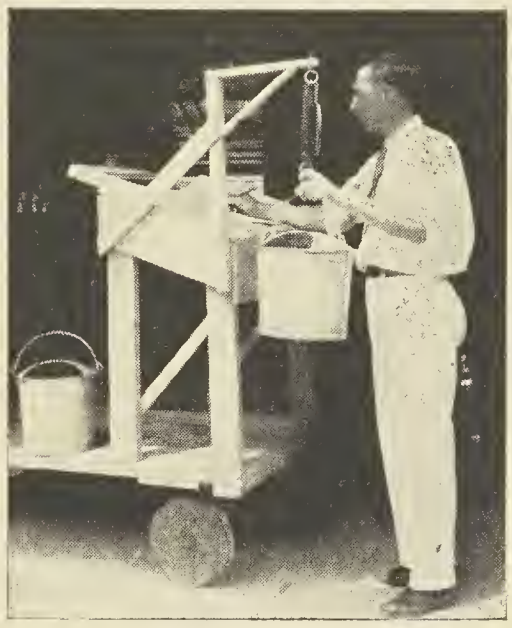
Beginning with the second year D.H.I.A. records, including identification, breeding, production, feed cost and health records were available for use in directing the herd management practices. Using these records as a guide the new herdsman has been able to increase the production of this herd from 219 pounds of fat to 400 pounds within five years.

Each animal in every herd of ten or more cows should be permanently identified by ear tag, tattoo or other permanent form of identification. In a small herd the memory may be trusted to identify old "Bessie's" calf when it comes into milk, but with medium to large size herds the "memory system" just doesn't work with any degree of accuracy. The writer has been in several medium to large herds in this state where the herdsman, because of a lack of identification records, could not definitely identify either the sire or dame of many of the young cows. The lack of this information makes it impossible to determine whether the herd sire is raising or lowering the production of his offspring which is a matter of as great importance to the breeder of grades as it is to the breeder of purebreds if the farmer hopes to stay in the dairy business.

Breeding records although simple are important. They should include the date of service, the name of the sire and the birth date of the resulting offspring. In order to not lose the identity of young stock it is desirable to cartag or tattoo each calf soon after it is born while the memory is clear as to the sire and dam.

Production records are used as a guide in feeding according to the ability of the cow to produce, in selecting heifers for replacements, and when combined with feed cost records, to cull out low producing unprofitable cows. To maintain a good herd average it is necessary to cull continuously.

There are two general classes of production records, private records kept by the herd owner and records kept by a disinterested party, such as a D.H.I.A. tester. Any farmer can keep private records on his herd and in small herds of less than 12 to 15 cows they are probably the most practical, however, in larger herds it is



Dairying is a business. Accurate records are essential.

more practical for the herd owner to employ someone to keep these records for him.

Milk production and feed cost records are used to determine which cows are profitable and which are unprofitable. Quite often the unprofitable cows in a herd eat up the profit made by the good cows. Feed is an item of expense whether purchased or raised and no cow should be kept in the herd which is unable to return

(Continued on Page 26)

W. A. Coble (left) and Mr. Short, PCA, (right) discuss America's food problem while Mr. Coble's herd rests "at ease."

LIVESTOCK MARKETS ESSENTIAL

By J. E. NICHOLSON

This matter of marketing is an old story yet it is extremely important. We cannot longer afford to ignore what it means to us. For too long a time, the farmers of this country have been compelled to sell on a buyers market often a distant market. We can do something to change this picture in order that we may sell on a sellars market. This simply means we will have more to say about the price secured for commodities—that is if something is done about it. It takes more than words, and hope, however, to bring about better and more satisfactory marketing facilities and obtain fairer prices.

Naturally the question is asked; what can I do about it? First of all we need to study our markets with a view of getting an over-all picture of actual production needs, study and understand the best kind of market to patronize, learn something of seasonal needs and by all means offer what we may have on improving our distribution facilities. Markets are born of conditions.

In the early days of this country, a hog market was born at Cincinnati because there was a surplus of hogs. As the country developed, these markets moved westward and finally lodged in Chicago for a time. Today, Chicago is the world's largest livestock market. It may not always be so. There has been a steady trend westward and now several of the far western and southwestern cities have developed, buy and find distribution for the livestock they produce. We are making some headway in the South but we need to do more. Cotton, tobacco and peanuts have long been grown. They are standard products in a large way. They are needed and used in our every day life. As the country grows and on a basis of world's needs production grows. Progress has been made in marketing these commodities. Here and there small markets for other commodities are springing up, some of them having made phenomenal headway, because someone did something about it.

Today there is a definite trend toward taking from Chicago some of the business formerly developed. Someone has seen the light. Small packing plants are being built the country over thus providing a market nearer home and one that we can all better understand. Most important of all, these markets aid materially in solving our distribution problem. Why grow a commodity, send it afar to be processed, then pay the return freight that we may consume our home grown products at home.

True, distribution has always been a perplexing problem. It can be solved if we follow the lead others are establishing for us. The Carolinas are predominantly agricultural. They raise a multiplicity of products that not only go far in feeding our own people but those of the world in a large measure. We produce crops that cannot be grown elsewhere, at least not so well grown from the standpoint of yield and quality. Does that make the picture any clearer. It should and we should do something about it.

Home marketing brings marketing to our doorstep. That simplifies it. We understand better. We should. Then let's make it a point first to get the world-wide picture in relation to the part we play in this world picture and establish markets in relation to needed production, distribution and consumption. For to long, we have produced blindly, marketed with our eyes closed even tighter—the result, overproduction or an underpaid producer or both.

But let's not get the wrong idea. Developing, crystalizing and establishing markets cannot be done over night. We need to survey and plan wisely letting forethought and time be our guide. When we build we should be sure our plans are basic and will not become ghosts of shadows thus further obstructing our real needs. We have the folks, we have the commodities, we need better markets and we can have them with individual and united thinking and action. We may think "Jones" pays the freight, but he doesn't. We do—over and over again. That we may overcome this vicious practice, we need more processing plants situated in our produ-

A TRIBUTE TO GRASS

By JOHN J. INGALLS

Next in importance to the divine profusion of water, light and air, those three great physical facts which render existence possible, may be reckoned the universal beneficence of grass. Exaggerated by tropical heat and vapor to the gigantic cane congested with saccharine secretion, or dwarfed by rigors to the fibrous hair of northern solitudes, embracing between these extremes the maize with its resolute pennons, the rice plant of southern swamps, the wheat, rye, barley, oats, and other cereals, no less than the humbler verdure of hillside, pasture and prairie in the temperate zone, grass is the most widely distributed of all vegetable beings, and is at once the type of our life and the emblem of our mortality. Lying in the sunshine among the buttercups and the dandelions of May, scarcely higher in intelligence than the minute tenants of the mimic wilderness, our earliest recollections are of grass; and when the fitful fever is ended, and the foolish wrangle of the market and the forum is closed, grass heals over the scar which our decent into the bosom of the earth has made, and the carpet of the infant becomes the blanket of the dead.

As he reflected upon the brevity of human life, grass has been the favorite symbol of the moralist, the chosen theme of the philosopher. 'All flesh is grass,' said the prophet; 'My days are as the grass,' sighed the troubled patriarch; and the pensive Nebuchadnezzar, in his penitential mood, exceeded even these, and as the sacred historian informs us, did eat grass like an ox.

Grass is the forgiveness of nature—her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass-grown like rural lanes, and are obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality, and emerges upon the first solicitation of Spring. Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements which are its ministers and servants, it softens the rude outline of the world. Its tenacious fibers hold the earth in its place and prevent its soluble components from washing into the wasting sea. It invades the solitude of deserts, climbs the inaccessible slopes and forbidding pinnacles of mountains, modifies climates, and determines the history, character and destiny of nations. Unobtrusive and patient, it has immortal vigor and aggression. Banished from the thoroughfare and field, it bides its time to return, and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled, but which it never abdicates. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the ever-lovely rose, It yields no fruit in the earth or in the air, and yet should its harvest fail for a single year, famine would depopulate the whole world.

cing, distribution and consumption areas. This is all coming but we can do more. Let's do more now. Tomorrow is in the offing. It always has been. It is now and always will be.

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Slightly Reduced Feed Requirements To Result From Larger Animal Sales

Washington, D. C.—Lifting of most of the remaining wartime controls on feeds in mid-October probably will cause less readjustment in market conditions than would have occurred at almost any other time of the marketing season, the Bureau of Agricultural Economies states in its October feed situation survey. Feed grain price controls had been off since the end of June. New crop corn was beginning to move in volume in late October, and market movement of oats was large.

The termination of price controls on livestock and meat probably will result in slightly reduced feed requirements during at least the first few months of the 1946-47 feeding season. Livestock marketings have increased sharply. Feed demands will be reduced by continued heavy marketings of livestock and the less favorable position of poultrymen. But higher livestock prices may also encourage some expansion in livestock production by next spring, especially hog production. That expansion would cause an increase in feed requirements during the second half of the season, with the net result that feed requirements for the season as a whole may not be greatly different from those indicated before termination of controls, the bureau says.

The outlook for feed grain prices during 1946-47, as a whole, was not greatly changed by the lifting of controls. But prices of most by-product feeds probably will be considerably higher during 1946-47 than in 1945-46, with high protein feed prices likely to show the greatest advances. Prices of commercial formula feeds also will be considerably higher than in 1945-46. Feed grain prices probably will average higher during the first half of the 1946-47 feeding season than in the first half of 1945-46.

Support prices for corn during 1946-47 will average slightly higher than the average price received by farmers during most of the first six months of the 1945-46 season. Moreover, the strong commercial demand for corn for domestic purposes and for export is expected to hold corn prices moderately above support levels during much of the season. During the second half of the 1946-47 feeding season, prices of corn and other feed grains are likely to average considerably lower than in the corresponding period of 1945-46, when prices of corn, barley and sorghum grains reached the highest levels since 1920. For the country as a whole, hay prices may average about $1 ton higher during the coming winter than they did a year ago, the report adds.

The shortest route to larger profits in the cattle business is by way of better sires.

Carolina Feed Outlook

"The feed industry as well as the purchasers of feed have been behind the eight ball for some time, but as I look into the crystal ball, the situation is beginning to clear, and any change in the general feed situation will be for the better." So said Commissioner D. S. Coltrane of North Carolina.

Mr. Coltrane qualified this prediction by saying this applies to carbohydrates and not to proteins. The tight feed situation which has plagued our livestock and poultry producers as well as the industry for several months apparently passed its most acute stage in early July, with new-crop oats, barley and wheat beginning to become available, and with abundant green feed in most sections of the state. However, restrictions still in force on the purchase and use of feed continue to limit the output of commercially mixed feeds and some by-product feeds.

Partly offsetting the larger domestic supply of feed are expected reductions in the guaranty of wheat for feed, and in total supplies of by-product feeds. Output of high-protein feeds may be about 5 per cent less in 1946-47 than in 1945-46.

The total supply of feed concentrates for the 1946-47 season, including feed grains, by-product feed, and wheat and rye for feed on the basis of earlier indications, would be almost 2 per cent larger than 1946-46 total supply of 160 million tons. The supply per animal unit would be 7 or 8 per cent larger than a year earlier.—Flour and Feed.

LIVESTOCK FORECASTS

Livestock

Meat production in 1947 probably will be at least as large as in 1946 and may be larger. Total output this year may be about a billion pounds under the 22.9 billion pounds produced in 1945, with most of the decline in September and early October. Slaughter of cattle, calves, and hogs, is expected to run ahead of last year during the balance of 1946. Slaughter of sheep and lambs, however, is likely to continue less than last year because of the small number of lambs available from the reduced lamb crop this year.

Dairy Products

Dairy products will continue in strong demand, at least through the first half of 1947. Domestic demand may fall off in the latter part of next year while foreign demand in 1947 will be the smallest since 1941, though still above prewar. In total, demand will be large enough to provide most farmers a good outlet for their milk and butterfat.

Wool

Because of large stocks and ample imports total supplies of apparel wool in the United States in 1947 probably will continue to be unusually large though domestic production next year will be the smallest since 1927. This expected decline in 1947 wool production is based largely on the prospective reduction in sheep numbers. The carry-over of domestic and imported wool on January 1, 1947, is expected to be larger than the 1946 carry-over of 798 million pounds and may equal or exceed the quantity to be consumed during 1947.

Don't judge a man today. Wait until tomorrow. You may understand him better then.

Poultry and Eggs

Farmers in 1947 will receive higher average egg prices than in 1946 particularly during the flush production season. Minimum support levels (90 per cent of parity) will be above actual returns in 1946. Supports are dependent on the prices which farmers pay—this rose about 10 per cent from June to September. Further increases in prices paid by farmers are in prospect so that support levels will be at least 7 per cent higher during the 1947 flush egg-production season than in the corresponding period of 1946.

State College Answers Timely Farm Questions

Question: What is a good receipe for making sausage?

Answer: Dr. Dan Brady, in charge of meats research at State College, gives this recipe: 1 pound of table salt, 2½ ounces of finely ground black pepper, and 2 ounces of sage for 50 pounds of pork, three-fourths lean and one-fourth fat. Mix the materials thoroughly and then spread evenly over the meat. Stir the meat well before chopping. Another popular North Carolina recipe includes red pepper. For 50 pounds of trimmings, use 1 pound of salt, 1½ ounces of ground sage, 1½ ounces of black pepper, and 1½ ounces of red pepper.

Question: Can you give me information on canning meat?

Answer: Extension Circular No. 284, "Canning Meat for the Home," contains just the information you wish. It gives practical pointers in canning poultry, giblets, beef, pork, veal, lamb, sausage, corned beef, soup stocks, and spare ribs. Just write the Agricultural Editor, State College, Raleigh, for a free copy of this publication.

Question: What does the Hessian fly look like?

Answer: Just examine some volunteer wheat that came up early in the season and pull back the leaf sheath at the base of the plant. There you will probably find the Hessian fly in the flax seed stage. James T. Conner, Jr., Extension entomologist at State College, gives the following dates for planting wheat: Piedmont, October 10 to 31, as from north to south; Coastal Plain, November 1 to 10 and Mountains from September 20 to October 20. Observing these dates will prevent damage from the Hessian fly and also give larger yields than when planted later in the season.

Grange Gleanings

(Continued from Page 16)

5. Asked for continued improvement of farm-to-market roads.

6. Urged that rural electrification and rural telephone service be pushed more rapidly.

7. Endorsed Flue Cured Tobacco Cooperative Stabilization Corporation.

8. Increase teachers' salaries 20 per cent and reduce teacher load.

9. Protested action of USDA in allotting more grain to distilleries while limiting domestic consumption of flour.

10. Urged state to give more attention to agricultural and industrial exhibits at state fairs.

Veterinary Conference To Be Held in Raleigh

The Ninth Annual Veterinary Conference will be held at State College in Raleigh January 28-31, 1947.

Dr. C. D. Grinnells, chairman of the program committee for the Conference and veterinarian with the N. C. Agricultural Experiment Station, in making this announcement, reveals that a portion of the program has also been drawn up.

Heading the list of lecturers invited to address the group will be Dr. B. T. Simms, chief of the Bureau of Animal Indnstry of the U.S.D.A. and formerly connected with N. C. State College.

In addition to Dr. Simms, other speakers will include: Dr. Frank Breed of Lincoln, Nebraska, whom Dr. Grinnells describes as a leading Midwestern authority on swine diseases. Dr. A. H. Groth, head of the Regional Animal Laboratory at Auburn, Alabama, will also speak to the group, as will Dr. R. E. Lubbyhuesen of the Purina Laboratories in St. Louis, Mo.

Earth changes, but thy soul and God stand sure.

—Browning

Sweet Potato Council

(Continued from Page 20)

parts of sweet potato sprouts momentarily in wettable Spergon solution. This is particularly necessary in fields where the stem-rot fungus is present in the soil. Use 2 ounces wettable Spergon per gallon of water. The Spergon prevents the soil-borne stem-rot fungus from gaining entrance through the wounded sprout ends until the wounds can heal and no longer be susceptible to infection. Less stem-rot plant infection and greater yields have resulted in every test made in stem-rot infected soil. In 1941 wettable Spergon treated plants had 7% stem-rot at harvest time and yielded at the rate of 324 bushels per acre, while 55% of the untreated plants in adjoining row were dead or infected with stem-rot and yielded at the rate of 198 bushels per acre. In a stem-rot infested field in 1944, untreated Nancy Gold had 64% infection and the row from which yields were taken yielded 234 lbs. An adjoining row of the same length in which the plants had been treated with wettable Spergon had 12% infection and yielded 664 pounds.

Practically no extra labor is required and the cost is but a few cents. Treating the seed prevents blackrot and other disease infections and results in a good crop of sprouts. Treating the sprouts at planting time prevent stem-rot infection by the soil-borne stem-rot organism.

DAIRY RECORDS ESSENTIAL

(Continued from Page 21)

a reasonable profit above her feed cost.

Five years ago, just before we became engaged in World War II, there were in North Carolina twelve active Dairy Herd Improvement Associations, with 187 members whose herds totaled nearly 9,000 cows. These herds were located in all sections of our state. During the war, cow testers, like men from every trade and industry, were needed in the armed forces. A number of the testers, removed from their associations because of the war effort, could not be replaced with other personnel, and these associations had to become inactive for the duration of the war. As testers become available old associations will be reorganized and new ones started. Two old associations and one new one have recently been started. Others will follow as soon as testers can be secured.

Health records are also important and should be kept on each cow in the herd. They may include a record of any disease, the treatment and results obtained, dates of T.B. and Bangs test. Many dairymen use such records in selecting family lines resistant to common cow ailments and thereby increase the productive life of their cows.

A combination of identification, breeding, production, feed cost and health records provide the facts upon which high producing profitable herds are built. It was the utilization of such information provided by D.H.I.A. records that largely enabled the herdsman referred to above to gradually raise the production of the herd in his care from 6,980 pounds of milk and 219 pounds of butterfat to 400 pounds of butterfat and 12,396 pounds of milk during a period of five years.

FARM BUREAU

(Continued from Page 17)

dising and research upon dairy products, an increasingly important subject for the industry in the future, was discussed by Mr. Owen Richards, General Manager of the American Dairy Association and by Mr. Milton Hult, President of the National Dairy Council. They discussed their respective organization programs and future planned activities in these fields.

Mr. S. W. Tator, Director of the Dairy section of Production Marketing Administration of the U. S. Department of Agriculture, had been extended an invitation to discuss the current and long-time outlook for dairying and the problems facing the dairy industry.

Dr. George C. Hart of the University of California, College of Agriculture, discussed the subject "War Experience In Solving National Feed Situations of Peace-Time Value." Dr. Hart is by experience an outstanding national authority upon this subject.

Following the above formal addresses, a discussion period was held.

The Dairy Committee of the A.F.B.F. met on Sunday, December 8 and again met immediately following adjournment of the dairy conference on Monday afternoon. The Dairy Committee submitted to the A.F.B.F. resolutions committee proposed resolutions relating to dairy problems considered by them or by the dairy conference to be important to the future welfare of the industry.

MEAT PRODUCTION RANKS HIGH

In terms of value of products, the production of meat animals ranks with the nation's largest industries. The wholesale value of all meats produced in 1939 was about $3,400,000,000. Only the production of the automobile industry had a greater value with a total of $4,000,000,000. Steel and oil, although ranking among the nation's top products, were both below meats in value.

Problems and Objectives

(Continued from Page 9)

business for all its members—Some overall planning to meet the overall problems that are indicated for both the immediate and the distant future of the industry.

These opportunities for the betterment of the economic status of the meat industry reach all the way from the grower of livestock to the consumer of meat. In other words from John Farmer's pasture and feed lot to Mary consumers table.

The meat packer is in the middle, and he is indispensable.

The meat must pass from the grower to the dealer, to the slaughterer, to the wholesaler, to the retailer, to the consumer. At every step there are certain immutable factors to contend with and certain practices to be executed. In direct ratio to the way these factors are met and handled the greater the efficiency, therefore the more profit to all concerned.

As a result of the actions and practices of the past, and the outlook for the future of the meat industry, a group of representative men of the industry have, for some time, been giving considerable thought and time in consultation with members of the N. C. Dept. of Agriculture to studying ways and means to best attain the desired ends. Not the least of their considerations has been given to the cleaning up of the war-imposed regulations, especially the checking and balancing and subsidy accounts.

These men have come to some very definite conclusions as to ways and means for better results. Their final decision was to the effect that a state wide trade organization is emphatically indicated.

Suiting actions to words they have formed a temporary organization, put up the necessary money and secured a charter from the Secretary of State and the services of a full time secretary. They are now inviting all meat men of the state to join in the movement.

The organization as now planned is a nonprofit, nonstock corporation. The charter calls for 15 directors. This gives one from each Congressional district and three from the state at large. Since to get the war time restrictions off and the subsidy accounts satisfactorily settled will undoubtedly call for requests to the powers that are in Washington, it is thought that this distribution of the board of directors will be very effective.

Objectives

The objectives of the Association are:

1. R.F.C. Subsidy Field Check—with Emphasis on Period Covered and Refunds.
2. Relief From OPA—By Presentation of Ultimatum—based on Economic Facts.
3. Livestock Dealer Cooperation—Sales Yards, Weighing, Handling, Care.
4. N. C. Grown and Produced Meat Use Promotion—At the Consumer Level.
5. Retailer Cooperation—Sales Promotion, Advertising, "Western" Competition.
6. Cold Storage—Evening Distribution, Lowering Production Costs.
7. Trade Marks and Brands—N. C. Products for N. C. Folks.
8. Better Plants and Methods
9. Trade Ethics
10. Individual Problems—Special Information, Sales Promotion, New Products, etc.
11. Contact Research Agencies, Government and Private—Lowering Costs, Increasing Profits.
12. Affiliation with Related Trade Associations for Mutual Benefits.
13. Freezer Locker Competition—Effect on Packing, Product and Sales Methods.
14. State Laws, Regulations and Statistic—Analysis, Application, Changes Due.
15. City and Town Laws and Regulations—License Fees, Health Rules, Unification.
16. Federal, State, Town and County Taxes—Equalization, Unification, Records.
17. Issue weekly News Bulletin—Made up of FACTS from the Following:—
18. Compilation of Federal Laws and Regulations—Analysis and Effects.
19. Federal Statistics—as applicable to this locality—Interpretation.
20. Grower Co-operation—4-H Clubs, Finishing, Selling Time, Breeds.
21. Shipping Rates and Regulations—Live Animals, Meat.
22. Supply and Equipment Buying—Wholesale Buying, Quantity, Discounts.
23. Meat Man's Manual—A Handy Reference Book of Pertinent Meat Facts.
24. Office Material—A complete Reference File for the N. C. Meat Industry.

To do these things requires a long pull and a strong pull by every one in the meat business.

The present organization has secured the services of Mr. A. Lyle Harris, who has temporary offices at 229 North Poplar Street in Charlotte, N. C. to carry on and complete the organization.

Mr. Harris has long been associated with the livestock growing. meat producing and distribution business in one way and another. He was, until he came with the North Carolina Meat Packers and Dealers, Inc. with the Reconstruction Finance Corporation in Charlotte where he worked on the field check of the meat subsidy in North and South Carolina. He is, therefore, familiar with the Government's methods and regulations and by virtue of this fact, is in a position to render members some needed assistance. Even tho the meat sub[sidy] has stopped the accounting will [go] on for two years or until the job done.

There will always be regulations on the meat business, war or no war. These regulations will range all the way from the Federal Government on down thru the state, county and town governments. And they will always be changing. It is to keep watch on these and have them the most practical and least troublesome set up that the association will ever be on the job. One man's voice would be crying in the wilderness, but all meat men speaking together would have weight with the powers that be. The same applies to the tax policies of the various units of government.

The time is past due when the Washington authorities should hear something about the North Carolina situation in regard to making the check on the subsidy payments. One of their unfair present rules is that, should a receiver of slaughter subsidy be paid less than was coming to him in certain claim periods and more than was coming to him in certain others, he is not notified of the under payments, but is required to return all over payments to the government. This will amount to thousands of dollars. This is a matter requiring immediate attention.

The question of proper weighing of livestock at public sales yards is one that is to receive prompt attention of the Association. Scales with an easily read clock face weight indicator under every auctioning should be a must for every auction sales yard. The buyer would then get the pounds he bids for at the time he bids.

"Hardware Disease"

(Continued from Page 11)

of such a nature that they are probably not particularly pleasant to have resting in the stomach. More of these might better be relegated to the junk collection heap and be sold as such. While the animal body needs and uses some iron, let's confine it to the trace elements found in the soil and in a much more available form in the feeds grown on this soil.

9. Wooden Objects

In the above photo of miscellaneous, large objects taken from the stomachs of cattle is a wood stick, probably a piece of hoe handle, about 12 inches long. Tooth picks have been used for years by man, but are seldom relished after meals by cattle. While it's almost unbelievable that a cow could or would swallow this large object, it was taken from a cow's stomach, and again may have been a case of depraved appetite—or a bit of carelessness on our part. Even though wood is a form of carbohydrate, it is decidedly lacking in digestibility.

10. Wire

Baling wire has long had a reputation for its versatility as a device for repairs around the farm. However, just as its use has not been the mark of good craftsmanship, neither is it an indication of good livestock nutrition. In fact, wire of all shapes and sizes has been removed as indicated in the above photo, and all too often it has been one of the objects that has pierced the stomach wall and heart or liver and resulted in emaciation or death. A little added care in disposal of unused wire would save both feed and cows, as well as a preventable loss to our dairymen.

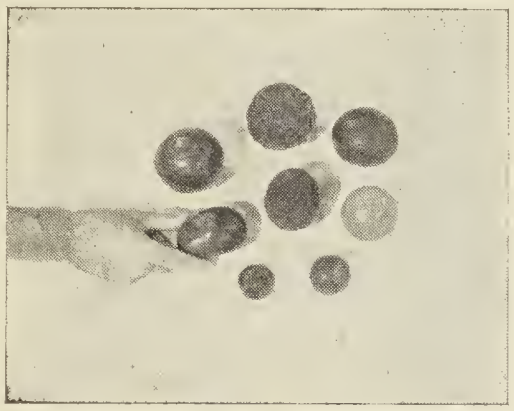
11. Nails and Staples

The mountain of nails and staples in the accompanying photo is mute testimony of the frequency of their occurrence in the stomach. The writer has found by actual count that close to 50 per cent of the foreign objects removed are nails, nails of all kinds. Tacks, brads, shingle nails, finishing nails, horseshoe nails, roofing nails, and wire nails of all kinds up to 20-penny spikes. Nails, too, of all kinds are pointed and naturally because of the large number and their piercing action, they often find their way to the heart and are fatal. Staples, too, are often found and their sharp, piercing action is not conducive to the best functioning of the stomach. While nails and staples probably cannot be entirely eliminated from the diet of our cows—we might by exercising a little more care in picking up and disposal of old lumber, in discarding and even in carrying nails, to make them as less available to our cattle. When we realize that practically every second foreign object taken from the stomachs of our cows, is a piercing nail, perhaps we will think just a little more about the proper disposal of old ones and a safe, convenient place for the new ones.

12. Miscellaneous Metal Objects

There are, of course, many other metal objects of various kinds and shapes—too many to attempt to mention. Many of these you'll see in the collection mounted in the accompanying photo.

The good dairyman feeds well. He realizes the importance of properly functioning digestive machinery. We often use the expression—"Throwing



Hair balls which form in the stomach of cattle.

a monkey wrench into the machinery." Let us not be found guilty of throwing foreign objects, "monkey wrenches if you please," into the digestive machinery of our cows. A "little" care may avoid "lots" of trouble and it can just as easily be that 500 pound butter fat cow as the cull at the other end of the barn, that swallows that destructive hardware.

How many times have you heard the statement that "She used to be a good cow, but she dropped away fast these past few years?" "She's thin, gaunted up, I'm afraid I'll have to ship her." And the packer, more often than not, finds the reason . . . man's carelessness . . . plus the cow's inveterate habit of picking things up. For no matter what the protein content of hardware, she still can't make milk out of it, and in many instances her stomach can not perform well enough with it to derive milk-making protein from the feed she does eat.

Recent surveys show that the age of cows leaving the dairy farms averages between 5.5 and 6.7 years. With this in mind, consider the fact that the dairy cow is a liability until after her first two lactations. Generally speaking, the first two lactations,

Fifty-five per cent of the total land area of the United States is in pastures—about one-half billion acres—and is suitable mainly for the grazing of livestock.

Ladino clover is proving to be one of the best permanent pasture plants in North Carolina. It's an improved white clover.

after deducting feed and labor costs, merely pay for the cost of raising her. Therefore, it is not until she is four years old, that she returns a profit to the dairyman who has raised her. Can we not safely assume that the above situation, coupled with the preceding figures, is a very probable cause as to why cows are leaving the dairy herds at the age of 5.5 years with but very small profit to the dairyman who has raised and fed her for four years?

Brahman Cattle

(Continued from Page 13)

in the back of his automobile, took home, and used on nondescript cattle, the offspring of which excited a great deal of curiosity among the farmers of that section. One of the persons whose attention was attracted to these calves was Mr. Lance Williams, Marion, S. C., who operates an abattoir. He was so impressed with the calves that he called me over long distance phone and asked that I purchase for him several Brahman bulls. At that time Mr. Williams had 450 high grade cows of one of the British breeds with calves sired by purebred bulls. I advised Mr. Williams that I would be glad to accompany him to purchase the bulls, since it would be best for him to make a closer study of the results in using the blood of Brahman cattle. This was in the spring of 1944. We made a trip to Florida and purchased 9 bulls. In the spring of 1945, Mr. Williams discarded all bulls on his farm except Brahmans. He received an average of $12.00 to $15.00 per head more for his calves by Brahman bulls in 1946 than for calves of straight British breeding, the difference being greater weight for age, since the calves all sold at the same price, based on quality and degree of finish. Anyone interested in this particular matter should communicate directly with Mr. Lanee Williams. During the past month Mr. William was in Texas purchasing another car of purebred Brahman bulls.

During the past winter Mr. J. B. Lattay, Manager, Riegal Paper Corporation property, Bolton, N. C., asked our assistance in developing a herd of beef cattle on cut-over timber lands of more than 100,000 acres in Columbus and Brunswick Counties, North Carolina. Based on the record of performance of eattle earrying Brahman blood at the New Iberia Experiment Station, Jenerette, La., and conducted by the Bureau of Animal Industry, USDA., Mr. Lattay decided to establish a herd of eattle containing some Brahman blood. A small foundation herd has been established, eows earrying from ¼ to ⅞ Brahman blood. Purebred Brahman bulls are being used.

While the Riegel Paper Corporation is interested largely in timber production, a drainage project is under way and the latter will soon be seeded to domestic pasture grasses and used in developing a eonsiderable herd of range cattle.

Great men are mere humans. You too, are human, therefore you may become great.

It takes a number of years to derive an income from cut-over forest lands. It is felt that a combination of forestry and beef cattle will make for a greater income. It is a fact that when any area is fully seeded to trees that little grazing could be expected, however, on any large body of so-called timber lands there are areas not so well suited to timber which can be seeded or sodded to grass and used for pasturing eattle; furthermore, fire lanes used in the eontrol of forest fires may be seeded to grasses and furnish considerable grazing.

The Frozen Food Locker Plant

(Continued from Page 15)

storage annually of half a million cases of eggs, whether these eggs be stored in the shell or broken and frozen. North Carolina nearly supplies itself with eggs. There are four months of the year when it has excess production and four months of the year when it has a marked defieit in production. The loeker plant can iron out this fluctuation with the storage and processing facilities available. It also can provide the market outlet should the poultry and egg producer inerease production above the needs of the local market.

Thus the possibilities for profitable development of the agricultural resources through the frozen food locker industry can readily be seen. As mentioned previously North Carolina will have one hundred thousand loekers and as many home units in use by 1950. The use of the home fruit freezer, freezing space in the domestic refrigerator will augment the growth of the market for frozen produce. Every day use of low temperature refrigeration in the home guarantees a standing and continuous outlet for a tremendous volume of frozen foods. The market for frozen foods will thus continually increase.

The frozen food locker industry does indeed appear to have been "made" for North Carolina. Needless to say there is little doubt but that this industry is providing the ladders to new heights in the development of the resources of the state.

The day is never long that has accomplished good.

HEREDITY AND POULTRY PRODUCTION

By C. H. BOSTIAN
Poultry Geneticist

HOW many eggs can a hen lay in one year? For most pullets beginning to lay, it is impossible to predict what the production will be during the next twelve months. Production depends on two great influences: heredity and environment. Let us briefly consider these two factors.

Environment has to do with the feeding and housing of the birds, and their condition as concerns diseases and parasites. Heredity refers to the passing of characteristics from parents to offspring. The science of heredity is concerned with the methods and principles by which traits go from one generation to the next.

Nowadays nearly every one knows something of the importance of heredity, and believes that blood will tell in plants and animals. You do not expect to gather grapes from thorns, nor figs from thistles. You do not expect great race horses to be born from draught horses, prize cattle from scrubs, nor should you expect to get high producing chickens from low grade stocks.

For many years poultry scientists have been improving egg production by learning more about the ideal environment for chickens, and the control of their diseases. You have learned of their recommendations, and by making conditions favorable, have given your chickens a chance to demonstrate their real ability.

Let us now consider some of the ways heredity influences egg production. Before much could be learned of this matter, two important events occurred. One of these was the rediscovery of Mendel's laws of heredity in 1900, which stimulated many people to experiments in animal and plant breeding.

At about the same time, another important event occurred. This was the development of a workable and dependable trapnest. Before this, the emphasis in poultry breeding was necessarily placed on such characteristics as plumage and combs. In the trapnest was provided for the first time a way by which the performance of one hen might be compared with another. It soon became well known that there was a wide individual variation in the number of eggs laid by hens of the same breed, as well as by hens that were full sisters.

After some years of trapnesting and the keeping of accurate family records, it was realized that egg production was not a simple trait like the kind of a comb a chicken has, but was a very complex characteristic made up of a number of factors more or less independently inherited. The most important of these factors are the age at sexual maturity, rate of production, broodiness, winter pause, and persistency of production. A hen laying 300 or more eggs her first year has all of these five conditions expressed in the ideal way.

By studying these five conditions separately, the great influence of heredity becomes clearly shown.

Age at sexual maturity refers to the age at which laying commences. In some full families, that is, full sisters, the average age at maturity is at 140 days, while in other families it is as high as 250 days, or almost twice as long. Through selection it has been possible to develop strains where practically all pullets have this early maturity.

It is obvious that annual production will be much reduced if the hen goes broody several times. That some individuals go broody frequently, and that others never, is shown by the trapnest records. In some families this trait has been completely eliminated.

Another factor is the rate of production. Eggs are laid in clutches. The hen lays an egg each day for a certain number of days, and then misses one or more days. The number of eggs laid in each clutch is a definite, inherited characteristic of each hen. Some lay two days, rest one, right through the month. Some lay one day, rest the next, and so on through the month. The production of such hens is much less than that of one laying five or six days in a row, with just one day of rest before beginning another similar clutch.

Winter pause may be defined as a period of non-laying, independent of broodiness, which when present may last from several days to two months or more. Heredity determines the

presence or absence of this pause. Among our records at the college are instances of this winter pause, where the annual production was reduced as much as fifty days by several months rest during the winter months.

A fifth factor is persistency of production, or how long laying continues during the year. Some pullets cease laying about eight or nine months after beginning, while others lay right on for a year or more, some through a full molt.

Record-making pullets have all of these factors expressed in the desirable way. Sexual maturity comes in 180 days or less, broodiness and the winter pause are missing, eggs are laid in large clutches, and laying continues for most or all of the first year.

These are some of the ways heredity influences egg production. It should be mentioned that there is one mistaken idea many people have of heredity. Like does not always beget like. In poultry breeding, family records are much more important than individual performances. Here are several examples of this. At the Maine Experiment Station eight years of selective matings on the basis of individual performances failed to increase egg production. Then selection was begun, using males and females whose daughters had made high records. In two years production in this flock was nearly doubled. At State College 1089, 1006 227 are Leghorn hens which laid about the same number of eggs their pullet years. Mated to the same cockerel, their daughters have given quite different averages. From 1006 eleven daughters averaged 282 eggs eggs their first year. From 1089 daughters averaged 264 eggs. From 227 the daughters averaged only 163, or a hundred less than the others.

If pullets are coming into production much later than usual, if they are going broody more often than before, or if their production is less than has been secured, all the blame should not be placed on the weather or the feed. Just remember that the parental stock may be responsible.

Besides the factors discussed, many other inherited conditions are related to egg production, such as egg size, growth rates, resistance to diseases, and general all-round vitality.

A Great Industry

(Continued from Page 12)

weight-reducing and weight-gaining diets and that it is just as necessary in the diet of the child as in the adult diet.

Marked progress has been made in learning more and more about how to cook meat so as to bring out its delicious goodness. The advance along this important line has been largely made possible through cooperative meat studies carried on at some twenty or more Land Grant colleges and the United States Department of Agriculture. The purpose of these studies is to determine the factors which influence the quality and the palatability of meat.

The North Carolina and South Carolina agricultural experiment stations as well as others across the country, have taken an active part in this cooperative project. It covers a wide field. Studies are under way, for example, to determine the effect of different feeds, feeding methods, age of animals, breeding of animals upon the quality of meat which these animals produce.

Studies in proeessing and storage of meat are also under way. Of especial importance are the studies in the field of meat cookery. Thousands of euts of beef, pork and lamb have been cooked by different methods and then tested for flavor, juiciness, tenderness and palatability. These studies have helped greatly in developing an appreeiation of the importance of cooking meat the right way.

As a result of meat cookery research, definite cooking methods have been worked out for all euts of meat. We know that tender meats should be cooked by the dry heat methods—such as roasting, broiling and panbroiling, and that the less tender cuts should be eooked by moist heat methods—braising and cooking in water, or simmering.

A very important meat cookery discovery is the one showing the value of cooking meat at low temperature. Hundreds of experimental tests have shown that meat which is cooked at low temperature, provides from 10 to 20 per cent more meat. In addition, the meat is more tender, juieier, is more uniformly cooked and is more appetizing than when a high temperature is used. This factor of low temperature in cooking meat is thus of especial value from the standpoint of meat conservation.

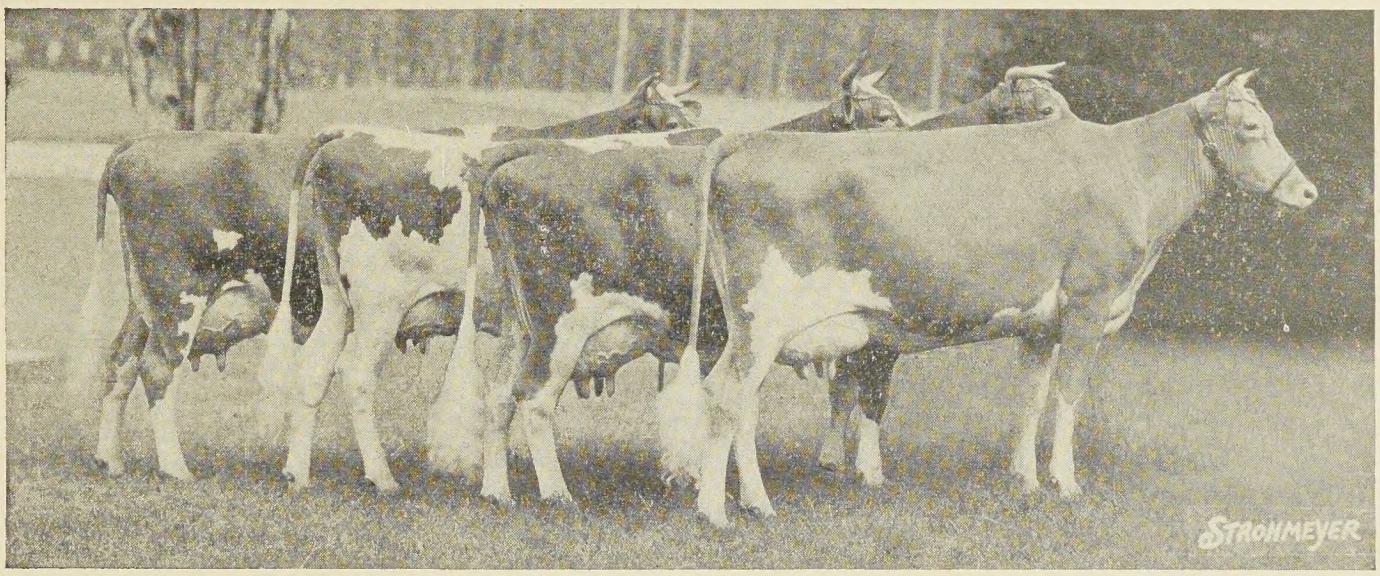
Our livestock and meat industry has been making progress all along the line, especially in the past quarter of a century. More and more knowledge is being made available relative to those feeding and breeding practiees which make possible more effieient gains in the feedlots, pens and pastures. New strains of cattle, hogs and sheep are being evolved, which should help to make livestock produetion more profitable.

No one knows just what is ahead for the industry. It would appear that many changes are in prospect in the merchandising of meat. It is probable that more and more meat will be sold in frozen form, and that there will be a growth in the number of self-service meat departments. Looking to the future, it is gratifying to state that there was never a time in the history of the industry when the nation was so "nutrition-conscious."

This new understanding of the importance of proper nutrition means much for meat. As already pointed out, meat is a rich source of the dietary nutrients so important to health. We also know that meat is one of the best-liked foods. The consuming public is more than ever before, aware of the necessity of meat in the daily meals. This is indeed heartening as we look ahead.

"Do they Milk and Do they Sell" ...

"We are in the market for a herd sire. We like the pictures we have seen of these Maxim cows but what we would like to know is (1) How do they milk and (2) how do they sell?" This very pointed and earnest query came to us recently and deserves an equally frank answer.



Four Daughters of High Point Prince Maxim

1. They fill the eye—It is generally admitted that the Maxims are pleasing individuals with well-attached udders; straight hind legs; straight tops and level rumps. Old Prince Maxim was used wholly on out-cross cows of all sorts, yet his daughters are extraordinarily uniform in type and color. Some of his best sons and daughters were from daughters and granddanghters of Langwater Foremost; possibly because these were better than the average cows to which he was bred.

2. Do they milk? Pretty fair, we would say. There have been quite a few Guernsey bulls used in herds where they know how to get milk from cows, yet no other Guernsey bull has yet equalled the Prince Maxim record of ten daughters with over 800 lbs. fat. So far that is par.

The sons and grandsons carry on. A son, Quail Roost Maxim's Medford (that we sold for $150 before we learned better) sired the cow that made more milk and more fat than any other Guernsey in 1945—Girl of Connemara Farm, 22407.6 lbs. milk, 1077.6 lbs. fat, Class A. This record was made in North Carolina.

3. Do they sell? In the six Quail Roost - Maxim Sales, 343 head have sold for $356,215.00, an average of $1,038.00. Only animals of Maxim breeding are accepted for this sale. Of the 343 head sold so far, 323 were close-up descendants of High Point Prince Maxim. The other 20 come through other good sons and daughters of Maxim of Linda Vista.

The 1945 Quail Roost Sale average of $1,897.60 was tops for the year. Every animal in this sale was a Maxim. The 52 head were consigned by 26 breeders and 20 of them were small Southern breeders who have done little or no advertising.

The top cow at auction for 1945 was Quail Roost Noble Primrose $17,000.00. She has 11 Maxim crosses. In 1946 she was Grand Champion at the Dairy Cattle Congress, Waterloo, Iowa.

A family that has pleasing type, sustained production and customer demand is a good family to tie to. We have good prospective herd sires for sale. Write for pedigrees.

Q R
FINE GUERNSEYS

QUAIL ROOST FARMS

FEDERAL ACCREDITED -- NORTH CAROLINA BANG'S-FREE CERTIFICATE 11

GEO. WATTS HILL
Owner

Rougemont, N. C.

W. W. FITZPATRICK
Manager

ACROSS THE EDITOR'S DESK

Livestock Production and Processing Are Receiving Timely Recognition

Never was there a time or a greater need to bring our livestock prohlems and their allied "segments" or the "industries" supporting the livestock industry into the channels of the public mind. During the exigencies of the war, the need was brought to bear hard on the consuming public. With meat difficult to find and purchase and the attendant high prices, people naturally began to wonder what was underlying the shortage and high prices. This was natural, but there was an answer. With livestock occupying a position of second importance only to the automobile industry of the nation, it is self-evident that there must be many component industries involved before meats and meat products reach the consumer. Many of the supporting industries were cramped and forced out. Any commodity produced must be sold at a profit to all handlers. At least that is the plan under which any business is conducted. Livestock growers are no exception.

An enumeration of the handling and processing involved furnishes a clear cut example. First the livestock, then the required feed, then the finishing process and the market. Still, the animals involved, after marketing, have merely changed hands. They are still in the live stage. Following comes the abattoir facilities for slaughtering and processing at which time the animals are still in the hands of either slaughterers or processors. There must be still the preparation for jobbing or wholesaling to a possible middle man, then to the retailer for cutting from the carcass what the consumer desires.

During all this time refrigeration has been necessary, both at initial points where the slaughtering is done and between or among the various handlers. As can be seen from this enumeration there are a number of handlers and processors involved, both in the live and slaughtered stages. In the background is the veterinarian, who uses both preventive and curative measures to keep livestock healthy. The distribution problem finally looms large in the picture. We could still go on and enumerate the many details of handling and processing jobs involved. There are many.

Fortunately, there is a new light appearing. This is the newly organized Meat Processors and Dealers Association of the state, which has for its motto, "More and Better Home Grown Meats, Handled under Sanitary Conditions with Inspection and Grading." This is a laudable objective, and the organizers and members of this association deserve the wholehearted support of the public. They are on the move. Much can be done to make meats more readily available under better conditions from a sanitary, economic, and distribution standpoint.

The whole picture is one of retroaction. Helping the handlers and processors helps the producer to grow more and better quality of animals. This is a real need. There is a bright star for action to replace what has formerly been well directed discussion but without the needed action. Let's help this movement along. It is laudable; it is a basic need and one for better health for North Carolina folks. May we move on to greater accomplishments.

The United States Chamber of Commerce Analyzes Our National Meat Industry

The production of meat animals is a major national industry. It is a source of a very large supply of essential food. In large sections of the country it is the primary agricultural enterprise, and in other sections it is an essential adjunct to other branches of agriculture.

A Source of New Wealth. As the basic source of a huge volume of new wealth each year, the meat-producing branches of agriculture are important contributors to the prosperity of many other industries and to a large segment of the non-farm population employed in those industries.

Ranks with Largest Industries. In terms of value of products, the production of meat animals ranks with the nation's largest industries. The wholesale value of all meats produced in 1939 was about $3,400,000,000. Only the production of the automobile industry had a greater value with a total of $4,000,000,000. Steel and oil, although ranking among the nation's top products, were both below meats in value.

Provides Employment. Meat production not only contributes directly a substantial amount to the income of the agricultural industry, but it provides employment for millions of people engaged in transporting, processing, packing, wholesaling, retailing of meats, and in the production of a great variety of products, from leather to pharmaceuticals. Directly and indirectly it contributes to the employment and prosperity of millions engaged in other industries.

A Key Industry. The production of meat animals is a key industry, both in the agricultural and in the national economy, Consequently its economic stabilization and its adequate and balanced development as a source of food and income are of general public concern.

Provides Essential Food Elements. From the standpoint of nutrition and health the production of meats has taken on greatly increased importance since meats are rich in vitamin B and have been found to provide "complete" proteins containing adequate amounts of the nine amino acids essential for the normal functioning of the human body.

FEED DAIRY COWS ON BASIS OF PRODUCTION

High milk production records are possible only when there is a real partnership existing between the farmer and his dairy herd. These records are a joint result of the cow's own ability to produce and the feed and conditions she is subjected to.

First we must begin with a good cow: one which has the ability to produce enough milk and butterfat to more than pay for the feed she consumes. Select the cow that is free from disease; at least average size for her breed; has well-sprung fore ribs and a large body that indicates plenty of capacity; a refined, clean-cut head and neck; a straight back; and a fairly large udder that is evenly hung with large milk veins. A cow of this type will nearly always he a good producer.

Some dairymen make the mistake of feeding all cows in the herd the same amount of grain mixture. This practice under-feeds the high producer and reduces milk flow. It over-feeds the low producers and, since they can't turn the extra feed into milk, they turn it into fat or waste it. Give the best cows the best feed; at least a pound of grain for each three to five pounds of milk produced, says John Arey, in charge of Extension Dairying at State College.

Provide good clean stalls with plenty of fresh water and clean bedding. Don't let cows shift for themselves; provide them with plenty of good pasture and roughage all year.

Cows Make a Land of Milk and Money

The South's No. 1 Opportunity

The grass is greener and the land is more productive when cows come to a farm. In such ways was dairying found to be North Carolina's No. 1 "crop." Make your income greater and your farm more productive. . . .

. . . SELL YOUR MILK TO . . .

COBLE DAIRY PRODUCTS, Inc.

We have a trained staff of dairymen who can help improve your herd and increase your milk production

We Need Your Milk - - So Let's Be Partners

Coble Dairy Products, Inc.

LEXINGTON, N. C.

COLONIAL FROZEN FOOD LOCKER PLANTS

Engineered and Constructed by

Southern Frozen Food Locker, Inc.

312 Raleigh Building
Raleigh, North Carolina

We are building freezer locker plants of the finest material and equipment known to the locker plant industry. These plants are especially designed to serve the farmers in the sections where they are located.

COLONIAL FROZEN FOOD LOCKER PLANT, DUNN, N. C.

Are You Contemplating a Locker Plant in Your Community?

IF SO, LET US SERVE YOU

We have plants operating in the following cities of North Carolina:

Wake Forest	Williamston	Mount Olive
Zebulon	Henderson	Burgaw
Dunn	Spring Hope	Fayetteville
Laurinburg	Scotland Neck	Winston-Salem
Oxford	Kinston	Pantego

In the following cities we have plants under construction:

Wendell	Washington	Mount Airy
Warsaw	Roanoke Rapids	Kannapolis
Tarboro	Raeford	Red Springs
Raleigh	Asheboro	High Point
	Edenton